An Address

ON

MODERN UNIVERSITY IDEALS.

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IF anything could enhance the pleasure arising from the cordial welcome extended to me it would be the thought that my visit is but an incident in the long line of intercourse, sometimes peaceful, at other times hostile, between the shores of Scotland and Ireland. Let me to-night assure you that this descent on your coast is on an errand of goodwill, and allow me also in the first place to direct your thoughts to the friendly and helpful influence reciprocally exerted by our two islands upon each other.

We need not inquire whether St. Patrick was a native of Erin, carried off as a slave to that part of the adjacent island then known as Alban, or whether he was born on the banks of the Clyde and kidnapped by some marauders, who might well be typified by the red hand of Ulster. Suffice it to say that he returned to Ireland when about 60 years old, after a close association with St. Martin of Tours—sometimes said to be a near relation—and in the second quarter of the fifth century founded that most interesting period of early Western culture—the Celtic civilization. While the Goidels and Brythons in Alban and Britain were still in the darkness of Paganism—somewhat polished, no doubt, in the southern region by Italian influences—in Ireland a most remarkable development of learning and art was fostered by your patron saint and his followers. For two centuries this early Christian civilization went on, almost uninfluenced by external agencies. These tendencies would naturally have spread to the adjacent island in virtue of their inherent truth and beauty, but a powerful impetus was given by a circumstance which, even in a youthful community, might be regarded as startling. One of the members of a kingly house in Donegal, afterwards known ironically as the "dove" of the Church, in some difference of opinion with another disputant, put an end to the discussion in the most effectual way by terminating the existence of his opponent. As a necessary result, the surviving party to the discussion deemed it advisable to change his sphere of activity, and in the middle of the sixth century, he passed over to the region now known as Argyll. Perhaps we ought to deplore such an outbreak in a Christian community, but it is difficult to avoid a feeling of satisfaction that this feud occurred, for it brought the influence of St. Columba into the affairs of my native land. From Iona, there went out over the whole of the country, then beginning to receive the name of Scotland—from the Scots of Ulster, who had passed over in numbers into Argyll—teachers who gradually converted the inhabitants to Christianity.*

* There can be no doubt of the accuracy of this statement, although other views have been held. The matter is thus put by Gibbon: It is *probable* that, in some remote period of antiquity, the fertile plains of Ulster received a colony of hungry Scots; and that the strangers of the North, who had dared to encounter the arms of the legions, spread their conquests over the savage and unwarlike natives of a solitary island. It is *certain* that, in the declining age of the Roman Empire, Caledonia, Ireland, and the Isle of Man, were inhabited by the Scots; and that the kindred tribes, who were often associated in military enterprise, were deeply affected by the various accidents of their mutual fortunes. They long cherished the lively tradition of their common name and origin; and the missionaries of the Isle of Saints, who diffused the light of Christianity over North Britain, established the vain opinion that their Irish countrymen were the natural, as well as spiritual, fathers of the Scottish race. The loose and obscure tradition has been preserved by the Venerable Bede, who scattered some rays of light over the darkness of the eighth century. On this slight foundation a huge superstructure of fable was gradually reared by the bards and the monks; two orders of men who equally abused the privilege of fiction. The Scottish nation, with mistaken pride, adopted their Irish genealogy: and the annals of a long line of imaginary kings have been adorned by the fancy of Boethius, and the classic elegance of Buchanan.

But this is far from all; the monks of Iona penetrated into the southern parts of the island, as well as the northern, and brought them under the sway of the Celtic Church. It is not too much to say that in addition to most of what is now Scotland, the three kingdoms of Northumbria, Mercia, and Essex, received Christianity at the hands of the followers of St. Columba before the advent of St. Augustine at the close of the sixth century. The memory of certain of the saintly men who achieved these triumphs is even to-day preserved in names to which some of the great English cathedrals are dedicated.

It is an agreeable duty to acknowledge that the early culture of Scotland, and of part of England, is due to the influence of an Irish Prince. During all the centuries which have elapsed since the dawn of Celtic civilization, there has been constant communication between the neighbouring countries, and, as might be expected, the intercourse between the North of Ireland and the adjacent island has been largely with the nearest shores. That ample aid in times of danger was constantly extended by the inhabitants to one another is shown in an amusing way by a somewhat contemptuous reference by Edmund Spenser in his interesting, although prejudiced, work, *A View of the Present State of Ireland*, apparently written before the death of Queen Elizabeth, but not published until the year when Charles I was crowned at Holyrood. In two or three parts of the conversation between the imaginary Eudoxus and Irenaeus, the latter, in the rôle of wise Mentor to inquiring Telemachus, speaks of the descent of "Scottes and Reddshankes," at whose hands the gentle Anglo-Normans received much evil.

ORIGIN OF UNIVERSITIES.

The origin of educational systems and the foundation of scholastic institutions must always be of supreme interest. It is more than probable that the ancient monastic establishments existed no less for the purpose of general education than of theological study. It is known that St. Patrick, in his quiet retreat at Armagh, formed a centre of learning and education, as well as a home of prayer and meditation. It is even more certain that your great countryman, St. Columba, in his cell on Iona—which beautiful name signifies "The Holy Island"—spent his energies almost as much in secular instruction as in theological training. For thirty-four years St. Columba laboured in such works, training men for the work of the missionary, and going himself from time to time either to establish or to encourage churches on the mainland. Thus Iona became, as it is put in the somewhat turgid language of Samuel Johnson, "that illustrious island, which was once the luminary of the Caledonian regions, whence savage clans and roving barbarians derived the benefits of knowledge and the blessings of religion."

We may assume that our most ancient universities took their origin in scenes similar to these. We must not inquire too closely whether it be true that an educational centre existed in Oxford during the reign of King Alfred. It is sufficient for us to know that centuries before the official foundation of University College by William of Durham, the banks of the Isis had been resorted to by generations of men in search of knowledge. Similarly the Abbot of Croyland established Gislebert and three other learned monks at Cottenham, whence they went across to Cambridge, and taught all comers in a barn hired for the purpose. In this way, for at least 150 years before the foundation of Peterhouse, a regular system of education was in existence in or near the spot now famous by reason of a great university.

There is a tradition that in consequence of a vision St. Rule embarked from Eastern shores with the bones of St. Andrew, sixteen holy monks, and three devout virgins, on an adventurous voyage. After a couple of years' cruising in the Mediterranean, through the Pillars of Hercules, and over the open Atlantic, the devoted band were shipwrecked at the spot formerly called Kilrymont, but in all time after known as St. Andrews. Here for centuries an educational centre existed, until in the beginning of the fifteenth century, on the initiative of Bishop Wardlaw, doubtless with the approval of James I, then, however, a captive in England, Benedict XIII granted a bull for the foundation of a university. In quite the same way, on the banks

of Molindinar Burn, St. Kentigern had a cell, where, indeed, tradition tells us he received a visit from St. Columba himself. This spot became a centre of education, secular as well as sacred, the latter being typified by the most beautiful fane which Scotland possesses, the former by the foundation of the University of Glasgow, about forty years after that of St. Andrews. Bishop Turnbull, at the desire of King James II, obtained a bull for the purpose from Nicholas V. Although we have been put in possession of a doleful picture of the condition of matters in the north-east of Scotland, there is evidence that around the old cathedral church of Aberdeen there were not wanting the elements of study and teaching, and here during the same century which saw the foundation of her older sisters, a third university was founded. At the desire of Bishop Elphinstone, James IV requested a papal bull from Alexander VI for the erection of a university there. Thus before the close of the fifteenth century five universities had been founded within the British Isles.

It is to be feared that the university men of those times did not possess a very lofty reputation, for in an old Act of the Scots Parliament, passed during the century following the foundation of the three northern universities, there is the establishment of a regular "Ordour of Punishment" for sorners, beggars, and vagabonds. The Act, after specifying jugglers, gipsies, fortune tellers, idlers, minstrels, counterfeiters of licences, and professional shipwrecked mariners, goes on to mention "all the vagabond scholars of the University of St. Andrews, Glasgow, and Aberdeen, not licensed by the Rector and Dean of Faculty to ask alms." It is enacted and declared that "those shall be seized and punished as strong beggars and vagabonds." The only consolation left to us resides in the knowledge that a similar reproach affects other and even more ancient universities. If the Reeve's Tale is not a grotesque travesty of the wandering student of the fourteenth century, he must have been, if a more picturesque, at the same time a much less respectable member of society than the undergraduate of to-day. The university students, nevertheless, of these old days were not all of such a pattern. You doubtless remember the words of the poet:

> A Clerk there was of Oxenforde also,
> That unto logike hadde long ago.

Of this ancient type Chaucer adds:

> Souning in moral vertue was his speche;
> And gladly wolde he lerne, and gladly teche.

The origin of the newer universities in the United Kingdom has been in many ways different from that of those with which we have just been occupying ourselves. They have not been erected by ecclesiastical authority, but have arisen in consequence of the wants of particular localities; some communities have been of great antiquity, as in the case of London, others have been essentially modern, as in the instance of Birmingham. The oldest of these modern universities are those of Edinburgh and Dublin, founded within ten years of each other in the end of the sixteenth century, and both, therefore, the first-fruits of the Protestant spirit. Both of these institutions arose within highly-developed communities, in which Church and State were adequately represented, the former receiving its charter at the hands of King James VI, and the latter at those of Queen Elizabeth.*

Each of these universities was from the first empowered to teach every branch of knowledge, and although the one has had Presbyterian and the other Anglican tendencies, they have now for long heartily welcomed every creed as well as no creed amongst teachers and taught. The Faculty of Divinity in each university has, unfortunately, been restricted in each case to one particular sect. It is to be hoped that, before long, the Chairs in the Faculties of Divinity will deal with the philosophy and history of Theology, and that they will be open to men of every creed. To this subject you will perhaps allow me to return somewhat later.

THE UNIVERSITY OF BELFAST.

It is an additional satisfaction to me to have the opportunity of meeting you at the commencement of this term, inasmuch as you are on the threshold of a new era. Although a castle was built here in the twelfth century, it seems that for quite 400 years nothing more than a village existed in its vicinity. In the beginning of the seventeenth century Chichester rebuilt the castle, and founded the town of Belfast by means of a charter granted by King James I and VI. For 200 years more the town grew very slowly, and at the close of the eighteenth century the total population seems to have been only about 12,000 or 13,000. Before the end of the succeeding century the population had risen to nearly 400,000. Within 100 years, therefore, a little village had become a large town, possessing magnificent public buildings of every kind. As scholastic, and more particularly medical, development demands our attention to-night, let me briefly mention that in the middle of the seventeenth century a physician and an apothecary were appointed to look after the sick poor of Belfast. In 1774 the charitable society was founded, in order to supply medical relief to those standing in need of it. Eighteen years later this developed into the charitable dispensary. A year afterwards the maternity society was instituted, and in 1797 the fever hospital was founded. In 1817 a general hospital was built, containing 70 beds for general and 30 for fever patients. This hospital in 1875 became the Royal Hospital, and in 1903 it was opened, after rebuilding, as the Royal Victoria Hospital. During the third quarter of last century the Mater Infirmorum Hospital was opened, while special hospitals of every kind were also added to the equipment of the city. Ample provision has therefore been made during the growth of the city for meeting its medical requirements. Just in passing, let me refer to the gift of the Medical Institute, which Belfast owes to the munificence of one of the present professors.

As early as the year 1817, when the old hospital was opened, an arrangement was proposed for training medical students in practical medicine and surgery, and ten years afterwards the far-seeing James M'Donnell delivered the opening clinical lecture, which was the real foundation of medical education in Belfast. An academic college was instituted in 1810, and in 1835 a well-equipped Medical Faculty was added to it. In 1845 the Queen's College was founded by Act of Parliament, and was opened in 1849. The Queen's University of Ireland, to which the Queen's Colleges of Belfast, Cork, and Galway were affiliated, was erected in 1850, and for nearly thirty years it pursued its way, more or less peacefully. In consequence, however, of dissatisfaction in certain quarters, the Queen's University was swept away, and in 1879 the Royal University of Ireland arose out of its ruins. Again for thirty years the Royal University struggled on, but by last year's Act of Parliament it in turn was dissolved to make way for its successors. For many years, therefore, Belfast has been a centre of medical education. For sixty years it has been the home of the most prosperous of the Queen's Colleges. For the future it will be the seat of a university. Let me most warmly greet the Queen's University of Belfast as an independent body. You are now in possession of privileges and responsibilities which your own energy will turn to good account. Be assured that your entrance as an independent member of the comity of the universities is hailed by all with the highest satisfaction. We hope the new university will take a noble part in education, in discovery, in invention. There is ample room for us all, and it seems to me impossible that any place can be found for jealousy, or any other form of littleness, in the contemplation of your new position.

In this brief sketch of the origin of your university reference has been made to James M'Donnell. Among many great names which render your record illustrious, you will permit me to mention Henry MacCormac, the pioneer in the modern treatment of tuberculous conditions; Thomas Andrews, one of the most famous chemists of last century; and Alexander Gordon, one of the most distinguished surgeons of the past generation. There are some other great names, but as their owners are fortunately still with us, it would not become me to mention their names. It is a peculiar pleasure to know that the university here is linked to that of Edinburgh by Peter Guthrie Tait and Sir Wyville Thomson, while it is similarly bound to Glasgow through Lord Kelvin and James Thomson.

* It is not to be forgotten that in Dublin there had formerly been a university attached to the Cathedral Church of St. Patrick.

The new position which you now occupy may be regarded as the result of evolution rather than of revolution. The same wisdom which has actuated the rulers of Queen's College during two generations is seen in the arrangements and regulations of the new Queen's University. A careful perusal of these, kindly furnished by Professor Lindsay, has convinced me that the statutes have been enacted with wisdom and foresight. It would not become me to speak of the course of study in literature, philosophy, or law; in fact, our survey must on this occasion be confined to the Faculties of Medicine and of Science.

The courses mapped out are skilfully arranged from every point of view, and speak for the practical sagacity of those who have framed the curriculum. Each of the earlier subjects is obviously intended to be taught with a view to its direct bearing on daily medical life, and amongst the later subjects there is an obvious and practical thoroughness in the scope of the work which is prescribed. One most important regulation is that not more than one examination shall be taken up in the same term. Another even more important provision is that attendance on a course in any subject of the third examination shall not be recognized unless the student has previously passed all the subjects of the first medical examination, and that attendance on a course in any subject of the final examination shall not be recognized unless the student has passed all the subjects of the second medical examination. Would that we had such regulations in the University of Edinburgh! The enactment, that at least three years must be spent in the Queen's University of Belfast, is absolutely in accordance with the statutes of all the Scottish universities; the other two years of study, here as there, may be spent in any other recognized university or school. Lastly, in reviewing the regulations of the Queen's University, the provision accepting all the previous examinations of the Royal University which have been passed by the undergraduates of Belfast commends itself to the judgement of every wise man as being equally generous and just.

Let me wish every prosperity to the newly founded Queen's University. Its members will doubtless strive in generous rivalry with kindred institutions for the advancement of science and the improvement of instruction. Ulster men are scattered in every corner of the world, especially in our colonies; they are everywhere found to occupy positions in the first rank. May the fame of the university bring their sons and daughters to study in the home of their forefathers; may they be not only numerous, but what is far more important, may they be endowed with bright intellect and high character. Such a brilliant future seems to be assured, and you may be certain that every other seat of learning will rejoice in your success.

Multiplication of centres of teaching really means increased opportunity of learning, and therefore the foundation of new universities and colleges is to be heartily welcomed; the relations, however, existing between all these educational establishments must be based upon a spirit of fair play. Magnanimity of mind and generosity of character are the only safe foundations. Here in Ulster you are safe; the future is with you; you have the game in your hands. It is not so everywhere.

THE NATIONAL UNIVERSITY OF IRELAND.

The hopeful anticipations which have just been expressed are linked with one feeling of gloomy foreboding which leads me to touch upon a subject that can only be described as thorny. Nothing but a stern sense of duty would tempt me to approach it; yet it would be craven on my part to shirk the task before me. My desire for the good of your country must excuse me, if excuse be wanted. For more than thirty years Ireland and her people have been objects of my warm affection and sincere admiration. Many lovely regions in every province of the Emerald Isle are as familiar to me as the hills and vales of Bonnie Scotland, and they are almost as well beloved. Let me premise that it is not easy for any one, even after long and intimate acquaintance with any country, save that in which he has been born and bred, thoroughly to understand it. On one point it is difficult, even for a Scotsman—and this is saying a great deal—to feel as deeply as you do—that is, on theological subjects. My own position regarding such matters can best be explained in terms of a truthful story. One of the most charming prelates of the Roman Hierarchy in Scotland used to be a clergyman in a certain town on the Moray Firth. Amongst its inhabitants was a shoemaker of Radical politics and agnostic views; the latter, indeed, could be aptly denoted by the phrase, employed by George Eliot to describe the type, as "rinsings of Thomas Paine in ditch-water." The future prelate was the object of his particular animosity and special criticism. This advanced thinker on political and theological matters was in great form on Saturday evenings in the public-house, when he, with great gusto, used to demolish all his opponents. But the heat of disputation was apt to induce a need for lubrication, and very frequently his arguments became less convincing and his conclusions more uncertain as the evening went on. In fact, it was by no means uncommon for him to wind up by tottering as much in final debate as he staggered in subsequent progression. One lovely winter evening the good priest wended his way towards the parsonage after visiting a friend who lived some distance from the town. The tail of the Great Bear was beginning to droop, the Twins were high in the heavens, and Orion had risen so far as to show his belt above the horizon; the lustre of these glorious groups of far-off worlds, however, was outshone by the brilliance of the rising moon, then nearly at the full. Like every Highlander, the kindly clergyman loved the face of Nature, and as he went pondered the words of an ancient writer regarding "the sweet influences of the Pleiades," and "the bands of Orion." But his thoughts were arrested and his attention attracted by some tremulous attempts at melody, apparently emanating from the ditch by the wayside. Crossing thither, he looked into the depth, and in the bright moonlight saw the Radical cobbler. The recognition was mutual. The quavering dithyrambs ceased, the bacchanalian worshipper—for, agnostic in all else, he gave practical adhesion to the power of Dionysus—stopped his vocal efforts. With a pawky smile, he ejaculated: "Losh me! it's the Scarlet Woman! Never mind, I'm aboon a prejudice; gie 's yer hand."

My position in respect of prejudice and bigotry is that professed if not practised by the political shoemaker. It would, indeed, in a past age of Scottish history, have been termed that of the despised moderate. Such a type of mind finds it impossible to sympathize with the *odium theologicum*, with which indeed modern science has nothing in common. Believing unreservedly that no part of the education provided by the State, whether in school, college, or university, should be connected with any particular church, and hoping earnestly to see the day when all university chairs devoted to Theology will deal with creeds and religions from a philosophical and historical, instead of a dogmatic and sectarian point of view, it has been to myself a matter of deep regret that it has seemed necessary in this age to endow any educational institution on the basis of a church system. Dogmatic theology has no place in modern science. It must, however, be frankly recognized, although at the same time sincerely deplored, that if an overwhelming proportion of the inhabitants of any country demands an educational institution founded in accordance with sectarian ideas, it cannot be denied without injustice. The legislation carried out by the present Chief Secretary for Ireland has been based on such lines, and it is to be feared that it will still further emphasize the ecclesiastical differences of Ireland. He may, indeed, be regarded as a modern Cadmus, who has sown the teeth of the dragon in a particularly fertile soil. In the arrangements proposed for the University College of Dublin and the National University of Ireland there is good reason to fear for the future. Placed alongside of an ancient and illustrious university, distinguished in the past by such names—to mention but a few stars out of a brilliant galaxy—as Romney, Berkeley, Patten, Goldsmith, Moore, Burke, Swift, Sheridan, Graves, Stokes, Banks, Haughton, Salmon, and Cunningham, it has been the hope of all who wish well to the cause of Irish education that the new university should in a spirit of generous emulation set herself the patriotic task of seeking to rival Trinity College in achievement and reputation. Unfortunately the tendencies already shown by those who are guiding the fortunes of the new university are not those which we had hoped to see. Leaving at present out of consideration everything except the study of medicine, it

must be said that the National University is proposing to make a start that is not propitious. It has to be remembered that, besides the School of Physic of the University of Dublin and the Medical School of the National University, there is another School of Medicine—that of the Royal College of Surgeons in Ireland. This school is absolutely free from sectarianism; it has done good service to the State; it has contributed observations of value to modern science, and it has trained generations of conscientious medical practitioners. Its annals are adorned by the names of Adams, Apjohn, Bellingham, Butcher, Cheyne, Colles, Crampton, Cunningham, Hamilton, Jacob, McDonnell, Marsh, Porter, and the three Stokes, to mention but a few of the distinguished men who have been connected with it. It is not too much to say that Irishmen of every province have added laurels to its chaplet, and that men also from the eastern shore of St. George's Channel have been happy to act with them.

The Schools of Surgery of the Royal College of Surgeons in Ireland.

Will you bear with me for a few moments and allow me to seize this opportunity to plead for fair play to the Royal College of Surgeons? Throughout the whole of last century it, side by side in friendly rivalry with the School of Physic of Trinity College, kept alive the lamp of medical learning in Dublin. It has amassed a magnificent museum; it has, by voluntary effort, equipped its buildings in the most thorough way for the purposes of medical education; yet, in spite of all these exertions, it is to be feared that under present circumstances it is face to face with ruin, and may have to end its existence as a teaching body. Such a termination to its career would be a national disaster. In one respect the School of the Royal College commands our admiration. Ever since MacLiag attended Brian Boroimhe at the battle of Clontarf—half a century before the Norman Conquest—your country has not only sent out great soldiers, but also great military surgeons. In this connexion we owe the Medical School of the college a deep debt of gratitude. It has supplied the navy and the army with generations of zealous and successful officers, who have at once shown themselves to be possessed of the highest devotion to administrative duty, and have also exhibited such a spirit of intrepid gallantry as to extort the enthusiastic admiration of all. When we glance at the various members of the military medical services, we find that amongst those who have won the Victoria Cross the alumni of the Irish college hold the foremost place. This is but one instance of the many services which have been rendered to the country by the college. To all fair-minded men it must be obvious that something ought to be done to obviate any possibility of the extinction of such a public-spirited body. The college knows no politics, it owns no creed. It should, therefore, win the generous affection of all liberal-minded men. It is to be hoped that His Majesty's Government will reconsider the answer which they made to the representation placed before them on behalf of the college. In the recent address of the President the facts of the case were fully stated. He showed that the recent Act of Parliament had completed the endowment by the State of every medical school in Ireland except that of the College of Surgeons. Mr. Lentaigne further pointed out that the college had never raised its voice against the endowment of other schools, that with the growth of medical science education had grown to be so complicated as to be financially unprofitable, and that it was right for the State to endow schools of medicine. What the college protested against was the endowment of one school and the neglect of another. When the college approached the Government they felt confident of success, since the institution which they represented was one which for more than a hundred years had successfully laboured, in a manner absolutely unsectarian and unpolitical, for the progress of medical science. Mr. Lentaigne stated that the Prime Minister had paid a high tribute to the good work which had been done by the college, but that he had gone no further than to comfort them with the pious hope that the college would not suffer by the new competition. It is quite true that Mr. Asquith went on to say that if it were proved later that the college was really injured the Government might possibly, although he could not promise it, reconsider the question. Soft words butter no parsnips. It is to be feared that the kindly remarks of the Prime Minister will not carry much comfort to the hearts of those who wish well to the Irish college. We all hope in Scotland that the Government will change its mind; no doubt you in the north of Ireland share this hope.

There can be no possible objection to subsidies from the State. We are all glad of such grants; indeed, we welcome them. Our four Scottish universities have for long had aid from the Exchequer. Subsidies of this kind, however, can only be accepted with two reservations. They must not be used to crush out independent exertion—in other words, to submerge individualism in socialism. They must, further, be apportioned in a spirit of fairness amongst those who are deserving of them. It must be made clear to the Ministry that we are strong on this point.

But this pecuniary disability is unfortunately not the only adverse circumstance against which the college has to struggle. Instead of trusting to honest work and sound teaching—which are really, as they ought to be, the only legitimate foundations for a successful educational establishment—the adherents of the new National University have been invoking every influence in order to compel students of medicine to enter the new academic portal, and to shun the venerable gates of the Royal College of Surgeons. The terrors of the Church, the threats of Sinn Fein, have been let loose. The facts are notorious. These remarks are not intended to be either ecclesiastical or political in their meaning; all that is contended for is fair play to every one. If the new university will manfully and honestly strive to attract students by strenuous exertion in research and in teaching, it will speedily attract the respect and esteem of every man of science; but if, on the other hand, it is to persist in a course of conduct like that which it is unfortunately entering upon, it will receive, and will richly merit, the regretful contempt of every right-thinking man.

Modern University Ideals.

These remarks lead naturally to what it has been my intention to speak about—that is, modern university ideals. Looking broadly at the aims of our universities, we may assume that the principal object in view is to train the undergraduates to play a useful part in the daily drama of everyday life. How this can best be done is the practical question which lies before every one of us. Healthiness of body and soundness of mind are the first great requisites, and every means by which wholesomeness, bodily as well as mental, can be assured deserves the greatest consideration. Newman defines a university as "a place of *teaching* universal *knowledge*. This implies"—as he goes on to say—"that its object is, on the one hand, intellectual, not moral; and, on the other, that it is the diffusion and extension of knowledge rather than the advancement. If its object were scientific and philosophical discovery, I do not see why a university should have students; if religious training, I do not see how it can be the seat of literature and science." This conception of a university seems to me too narrow. All our modern universities are framed on broader lines. They not only diffuse knowledge but they advance it. They advance knowledge by scientific research, by philosophical investigation, by literary effort, by historical inquiry—by every means, in short, through which additions may be made to the sum of our knowledge. Thus the ideal of a university must be much wider than was dreamt of by the Cardinal when he penned these words.

Let us look upon the university in the first place from the point of view of administrators and teachers, with more or less power in our hands to shape its destinies. It is sometimes difficult, even when the spirit of change is abroad, and periods of transition are upon us, to modify old institutions. The suggestive and interesting address which Lord Rosebery gave in connexion with the Glasgow University Club in London, shows us that there is in some minds considerable dubiety as to the possibility of filling old bottles with new wine. It is probable that he exaggerates the difficulty, and nothing is more certain than that the old universities have been doing their best to assimilate new methods. But they are wise in this respect, that they insist upon broad general training as a necessary preliminary to more professional education.

In the weighty and eloquent words which the President of Harvard University addressed to us at his brilliant inauguration last month, he pointed out that the old type of college had a solidarity which enabled it to carry out its object well enough for its time, but that, with the enormous enlargement of the field of human knowledge, new subjects have had to be, and must yet be, admitted to the scheme of instruction; it therefore has become too much for any one student to follow, and this divergence in pursuit is apt to produce intellectual isolation and loss of social unity. As the aim of university education is not to produce hermits, each imprisoned in the cell of his own intellectual pursuits, but men of the world, able to take their places in the community and live in contact with their fellow-men, some system must be formed which, without sacrificing individual variation too much, or neglecting the pursuit of different scholarly interests, will produce intellectual and social cohesion. Mr. Lowell went on to express the view that an ideal college would contemplate the highest development of the individual student, the proper connexion of the college with the professional schools, and the relation of the students to one another.

It is indeed no aim of university life merely to produce narrow specialists; we all wish to see our graduates possessed of rounded intellect, of wide sympathy, of unfettered judgement. It is not too much to expect that a training in our universities should give freedom of thought and breadth of outlook, so that the alumni are fitted to take their places as good citizens. Holding such views, the wider the culture, the better the result. Some acquaintance with the great literatures of the past is absolutely essential. Nothing can ever rob classical learning of its high value in a scheme of training. Similarly, some knowledge of the laws of thought is a matter of the highest moment. There is no better corrective of the arrogant self-sufficiency of imperfectly trained scientific men than the acquisition of at least the elements of "divine philosophy." As students of natural science, under which term a medical education must rank, the forces of Nature require closest study, and the inquirer must be taught to lift the veil which hides the springs of life. He will learn by degrees that these agencies are not wholly mysterious, but that they are a chain of causes and effects with which close acquaintance must be made. How are we to arrange a course of study to meet such requirements? My own feeling is very strongly in favour of a thorough preliminary training, and it seems to me advisable, if it were possible, that the aspirant to medicine should take a degree either in Arts or in Science. There are, undoubtedly, difficulties in regard of time and money. In the wise regulations which have been framed in this university some of these difficulties are removed, at least in part. The third year required for graduation in arts may be devoted to biological subjects, and in that case is allowed to take the place of one of the years of medical study. Similar arrangements have been adopted for the degree in Science, and therefore a very thorough training may be ensured at the cost of not more than two extra years of residence.

It has always seemed to me that the systematic lecture holds far too high a place in the universities and schools of our country, and more particularly in Scotland. During my different visits to Canada and the United States it has been a matter of much satisfaction to find that in the great universities across the Atlantic, such as Montreal and Toronto on the one hand, Harvard and Hopkins on the other —all four with admirably-equipped medical schools—the systematic lecture holds a comparatively subsidiary place. So much is this the case, that when Professor Osler came to be the guest of the Royal Medical Society of Edinburgh, and kindly undertook to deliver the lecture, fondly termed "clinical," which had fallen in turn to me, he informed me afterwards that it was the first systematic lecture that he had ever given in his life.

The occasional stated lecture has, no doubt, at times its uses—for example, to provide a summary of work which has been done, or to shape the course which has to be followed. But to give a hundred or a hundred and fifty lectures on any subject in the medical course in this age of excellent books is an absurdity that should be abolished. We have no use for the lecture if it is simply like the "resurrection pie" of the frugal housewife. It must contain some new facts, or it must have some fresh method of presenting them, or it must have some of the personal experiences of the teacher, or it must be given with dramatic force. If it be the dull, lifeless address, to which all of us have had to listen, it is without excuse; a gramophone would do just as well—nay, often much better.

We are everywhere becoming more accustomed to the use of demonstrations instead of old-fashioned lectures—demonstrations to small groups of students, in which each can see close at hand the subject of study; exhibitions of all kinds of specimens; employment of lantern slides to show objects which are not at hand—such measures, along with question and answer, will inevitably take the place more and more of older methods of teaching.

Again, and even more useful, is practical work, in which each individual student is not only taught to see objects, but how to prepare objects to be seen, how to employ every kind of instrument, and thus to use eye, and ear, and hand.

Above everything, clinical work in the wards and laboratories of the hospital is of paramount importance. There was a time when a great part of the life of a student was spent in "walking the hospital," as the phrase went. This gradually became overshadowed by the influence of the didactic lecture. But time brings its revenges, and it is satisfactory to know that the pendulum is swinging back again, so that the hospital is once more obtaining its fair share of attention. It is no use going about the hospital simply to loaf, and a thoroughly organized method of instruction must be carried out. In the first place, the number of students attached to each ward must not be too great. It has been my fate at times to have as many as one hundred and twenty clerks attached to my clinic, in which the official number of patients is forty. Each one of these clerks had at most one-third of a patient. With every arrangement for subdividing such a group into juniors and seniors, with the assistance of a zealous assistant-physician, an enthusiastic clinical tutor, and a couple of devoted house-physicians, we yet felt that we were overwhelmed by numbers. It is undoubtedly necessary for thoroughness of teaching that the number of patients and of teachers should bear some kind of relation to the number of students.

Another point to be referred to from this point of view is the necessity of seeing that the undergraduates have sufficient time for reading and thinking. Under present circumstances there is so much pressure throughout the day that the unfortunate undergraduate is only able to have a quiet hour or two after all sensible people have retired for the night. This is not as it should be, and a little time for useful idling must be secured. The student will do his work very much better if he is not driven like a slave in the old cotton-fields under the lash of the overseer. A return to study will always be easier after a pause from labour.

One last important point is that those responsible for the superintendence of the undergraduates should show an interest in their recreations. All forms of athletics are to be commended, and it appears to me that the undergraduate will be immensely helped if teacher and taught can mingle in connexion with sport. There are undoubtedly some difficulties, chiefly owing to the multiplicity of engagements that have to be fulfilled by the middle-aged teacher. These, however, are not insuperable. You cannot expect a grey-haired man of 50 to take a hand in the "scrum"; even less to act as "half-back"; but a friendly golf match between teachers and taught will bring all into greater harmony.

We have, in the last place, to consider the university from your point of view as undergraduates and the influence which you can exert upon its development. The academic influences by which you are surrounded undoubtedly modify the course of your lives in a manner which is usually momentous. On the other hand, each one of you has more or less influence upon your fellow-students, and, let me add, upon your teachers also. There is nothing so stimulating to a good teacher as to have good pupils; they act and react upon one another in such a manner as to produce the highest results.

The first matter which is incumbent upon all of you is to find some definite object. Stevenson says in the

Amateur Emigrant: "An aim in life is the only fortune worth the finding." Each one of you must at times sit down seriously and think over the intentions, if you have any, with which you have come to the university. The qualifying clause, "if you have any," is not of the nature of a sneer. It so happens that a very large number of men are sent to the university in order to make up their minds what their life-work is to be, and therefore it often happens that amongst the undergraduates a considerable proportion are found not to have any very definite views as to their future. Let us, therefore, take it that each one of you is of a mind to do the best in order to be fitted for the duties of life. The first piece of advice which any of us will venture to give you is to work hard. It is one of the ghastly portents of this age that men are demanding that no one should be allowed to work more than eight hours a day, an eye being kept on the clock every minute of the time. That kind of thing, in no matter what sphere of life, will certainly, if persisted in, wreck this country. It means a fatal descent from the strong tendencies of individual independence to a weak refuge in socialistic dependence. Try to picture for yourselves the successful professional man or business man, reaching any position of eminence on an eight hours day! No! we have all, without exception, to make up our minds that if we really wish to arrive, it can only be by unremitting and self-sacrificing labour. If any of you desire to see how this aspect of academic life struck one of the most strenuous men of last century, let me recommend you to read Thomas Carlyle's letter to a medical student. It is but a type of what all the great men have reiterated. "Work while it is the day" is no less true in this age than it was nineteen hundred years ago, and let me urge you, furthermore, to remember that the present is the only time in which you will be able to work at all.

> Life holds not an hour that is better to live in: The past is a tale that is told,
> The future a sun-flecked shadow, alive and asleep, with a blessing in store.

But, let me add, the blessing in store is only won by those who seek for it. You must not, however, go away thinking that it is my intention to commend simple plodding. Far from it. We often do a great amount of work when we are apparently doing nothing but idling. It is most helpful for us all to sit down quietly to think, but the point is that unless the mind is well stored with information the thoughts are apt to be of the most flimsy description.

The most of us would like, as far as possible, to ease you of some of the burdens which you have to bear, some of which we frankly think are unnecessary. As some aspects of this subject have already been laid before you, it is unnecessary to add more upon the relative time to be devoted to the different branches of your work. You will, however, allow me to say once more that in my opinion a quite exaggerated amount of importance is given to the place of lectures in the curriculum. It may not be quite so bad here as it is in the Scottish universities. There every one of us is struck by the fact that hundreds of men will patiently sit and take down the words which fall from their systematic teachers' lips, as if they were jewels of priceless value, while it is difficult to induce them to come to a demonstration, and still more difficult to lead them to take a part in real practical work. In respect of your own work, let me strongly recommend you to do as much in the laboratory and in the ward as you can obtain time for, and suffer me further to advise the habit of reading widely.

One important factor in the life of the undergraduate is to be found in the friendships which are formed at college. There is something lovely and touching in school and college friendship. In the classical story, *Tom Brown's School Days*, as also in the interesting tale, *The Hill*, the influence of youthful friendship is beautifully drawn. The ennobling influence exerted by friends of high character cannot be overestimated, and it is fortunate that in school and college there is such a factor as hero-worship. "In this world there is one godlike thing," says Carlyle, "the essence of all that was or ever will be of godlike in this world: the veneration done to Human Worth by the hearts of men. Hero-worship, in the souls of the heroic, of the clear and wise—it is the perpetual presence of Heaven in our poor Earth: when it is not there, Heaven is veiled from us; and all is under Heaven's ban and interdict, and there is no worship, or worth-ship, or worth or blessedness in the Earth any more!"

One last subject must briefly occupy our attention—it is recreation. Celsus tells us that it is a sacred duty for every man to spend some time in taking care of his own health. A remark has been made in passing upon the necessity of idling, but idling must be done with wisdom; in other words, it is necessary to relieve the monotony of work by some change. It is to be hoped that each one of you has got a hobby, be it in the walks of literature, in the fields of science, or the domains of philosophy. Time was when the undergraduate distinguished himself as a collector of such subjects of "bigotry and virtue" as door-knockers from private houses and golden effigies employed by tradesmen as ensigns of their wares. Trophies such as these, recalling the times of Bob Sawyer and Ben Allen, are fortunately no longer in such demand as they used to be, and our undergraduates are more likely to make scientific collections than to form a museum of trade symbols. It is unnecessary for me to speak to you of the pleasures of different athletic pastimes. It is probable that every one of you is keenly alive to their delights. You will suffer me to express the view that it is far better that every one should engage personally in such pastimes than to be one of twenty thousand spectators watching a football match as if it were a gladiatorial show. In conclusion, permit me to express the hope that in your work and in your play, in your public relations, as in your private friendships, you will always play the game. In this alone is it possible to find real happiness. All of us, professors and teachers, as well as the grateful guest now addressing you, earnestly desire that your days in the Queen's University may be so full of peace and joy as to leave when the time comes for you to depart from these halls, recollections so fragrant that each of you may be enabled to echo the words of your great national poet:

> Long, long be my heart with such memories fill'd!
> Like the vase in which roses have once been distill'd—
> You may break, you may ruin the vase, if you will,
> But the scent of the roses will hang round it still.

The FitzPatrick Lectures

ON

GREEK MEDICINE IN ROME.*

BY

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Prayer for the old Roman arose in no sense of sin; as Cicero frankly says, it was not to make him good, but for material benefits, for a bargain with the proper deity—"si deus, si dea . . .," as Cato would commence not only medical operations but even the felling of a tree—for help, health, or wealth. In the hard transactions of Roman religious contracts the mystic elements of Greek and Hellenistic religion had not then any acceptance. Fortune, says Mr. Warde Fowler, was the favourite goddess of old Rome, and he aptly shows that *sacrum* with the Roman meant no matter of feeling but of law and rite; the gods were placated and taken into the community as a kind of citizens.†

Furthermore, to comprehend this matter we must appreciate the unit with which, during its integrity, Roman honour, prowess, and gratitude were built up; this unit was the household, a body animated and governed by the husband and wife, who in early times were

* This lecture, which is intermediate between the two published in the Journal of November 20th and 27th, was not delivered at the Royal College of Physicians.

† For much concerning Roman manners I have, of course, to acknowledge our common debt to Marquardt.

married sacramentally and indissolubly by *confarreatio*,* or wedding cake, eaten with the Deo Domus. This custom was a public rite as well as an initiation into the *sacra domus*. Herein the Etruscan and the northern traditions were similar.† But, though the wife within her sphere was in honour, the authority of the paterfamilias was supreme, originally even to life and death.‡ The Roman children, somewhat after the manner of the English, received little intellectual but a good moral education—namely, to be manly, silent, modest, obedient, sober, and devoted to the State and the gods, ideals which were indeed identical. As with our youngsters, however, the pampering effects of wealth, luxury, and idleness soon began to undermine this discipline.

Now, among his other functions, the paterfamilias was medical officer of health and physician to his household, which included his slaves and his cattle. Veterinary medicine, as we gather from Cato to Columella, and to Vindicianus, had a considerable part in Roman economy; and I regret that my present limits forbid me to make use of its interesting lights upon the subject. As medical officer of health the paterfamilias had to fence out not only his adversary, or chance marauders, but also those hostile spirits whose arrows were sickness and pestilence. Upon him, under the auspices of Mars, the god of boundaries, lay the responsibility for the precise formulas by which they were to be repelled, and the safety of family, cattle, and crops within his consecrated precincts secured. Even Cato sought to ward off a certain calamity by a processional sacrifice. And if, after all, disease got in, or in any case when his wife lay with child, or a slave broke his leg, this practical man expected his deities and his traditions together to provide him with the right weapons to fight the disease, the pain, or the injury. These means, though in part incantations, yet included the aid of simple operations, and of certain drugs, mostly herbal. Up to the time of Cato the folk method was theurgy *plus* the drug; then the drugs, escaping gradually from the theurgy, ultimately attained the marvellous compound virtues of the galenicals and mithridatics which, at a later date, were scarcely less supernatural.

Of natural products those which were notable for oddity of feature, or peculiarity of taste or odour, readily found their way into the pouches of the healers; and as in the earlier days we are contemplating there were not yet pharmacists, perhaps not even professed cullers of simples, these specific products were gathered or procured from the merchants by the paterfamilias, and placed in the store closet or Penates, which holy shrine thus held the guarantees of the well-being of the family and estate. The Penates, then, were in part the material of folk medicine in every household, and the paterfamilias was its high priest.

We need not suppose the materia medica to have been a very meagre collection. Self-contained, austere, and rustic as was the older Roman, it has always appeared to me that Marquardt and other civil historians have laid too little stress on his trading capacity. Much of the vast wealth of the Empire was no doubt acquired as spoils, and Ostia, like Marseilles, was out of the line of tolls which enriched Sheba, Jerusalem, Tyre, Mycenae, Corinth, Venice, and other keepers of the gates of traffic; yet even before the Punic wars, and long before the possession of Alexandria, Rome was the centre of no inconsiderable commerce. The site of Rome, like that of Athens, combined the advantages of inland security with those of a seaport not too far away. Moreover, the recent excavations on the lower Tiber have discovered two ports; the newer port of Ostia built, in the security of a command of the sea, farther from the guardian city, was a splendid mercantile town of stately warehouses and tabernae, and of rich dwellings containing precious works of Hellenic art. This Ostia was constructed under Claudius lower down the river when the old harbour had silted up. But the nearer Ostia, founded by Ancus Martius before Rome had command of the sea, was the ancient and by no means inconsiderable emporium of Republican Rome; and of its turnover the spice and drug traffic was no insignificant part. The greater the perils and the hardships of transit the more portable the articles of merchandise; and in early Rome, before the destruction of Carthage and the suppression of piracy, a large part of the trade would consist of the spices, incense, and the rare unguents, such as styrax, myrrh, spikenard, or opobalsamum, in precious boxes under seal and signature (epangelia), which in early and mediaeval times were so universally in demand as, with gold, gems, ivory, silks, etc., to kindle the adventure and paint the romance of the merchants of olden days. In great houses, in guilds, in monasteries, these medicinal Penates were handed down to later times; and interpreted for domestic and charitable uses by such books as *Le Manuel des Dames, formules de médicaments . . . remèdes aux pauvres*, etc.; Bonham's *The Chyrurgion's Closet et Antidotaire*, etc. In the old Yorkshire homes of my childhood there lingered still the locked cupboards containing the quaint jars and hieroglyphic boxes aromatic of pepper, allspice, cinnamon, conserves, and strong waters; and charged also with the less attractive redolences of only too familiar drugs and draughts. Our grandmothers and aunts, who, like Diana of Poitiers, were well versed in domestic medicine, made and administered our potions and powders, and those of the more grateful poor. For we children liked better to search their pockets for the pretty silver grater with the rattling nutmeg bidden in the head of it, for the arabesque and antiseptic vinaigrette, and in the depths for the few corns of cloves so warm to our teeth. Pardon my garrulity—of memories running back upon these Penates, and to the marvellous legends of the spices guarded by winged serpents, and by ants in size somewhat less than dogs, but rather bigger than foxes, which had been gathered for our child's story books, and their queer woodcuts, from the innocent pages of the Father of History. Of these exotic trucks, pepper especially counted for much in Roman trade, as it did in mediaeval times. I had been wont to suppose that the pepper was to preserve and give sapidity to the staler meats of winter; but Mr. W. H. S. Jones has pointed out that no doubt it was also used extensively as an antidote to the malaria. On the importation of the malaria, then—whensoever after the flourishing of the rich cities of Magna Graecia this may have been—that of pepper must have increased in some correspondingly enormous proportions.

But old Roman folk-medicine did not consist by any means in simples and in spices only; it consisted no less in customs, rites, and magic, some engendered of the natural brood of mankind, such, perhaps, as the primaeval creed of the great Earth Mother, or the custom in folk-medicine of laying out the sick in the highways for the aid of some passing traveller; some imported from the East, as by the Etruscans, by the opening out of the East in the Persian wars,§ by the campaigns of Alexander, who carried a magician with him as well as the *Iliad*, and by the avenues of commerce. From the Oxus, from Mesopotamia, from India and Sheba and the Persian Gulf, possibly even from the tin islands of the Far East, by the Caspian and Black Sea to Sinope and the Balkans, or by the old caravan track still extant from Byzantium to Ragusa; or by the Royal Road through the Cilician Gates and Pteria to Ephesus; or, again, through the lesser desert to Hebron, Jerusalem, Tyre, Nauplia, Mycenae, and Corinth, there had been for centuries untold a perennial stream of ideas as well as of merchandise. The wide and various wanderings of the old Greek philosophers and historians, and their harvests of learning and experience, were not likely to be forgotten; for, in days when manuscript was rare and meagre, memory was retentive. We are finding in the Middle East heaps of clay tablets in Assyrian script, but in their matter recording traditions of magic, astrology, and

* Although for various reasons, good and bad, confarreatio became less frequent and divorce more frequent; and, as with the women in all wealthy societies, extravagance in dress, luxury, and morals increased. Yet even then women ranked much higher in Rome than ever in Greece. I may observe in passing that the idea that in sexual honour there should be one law for man and woman alike is as old as Plautus (Mercator iv, 6), and that it was approved by so shrewd a man of the world as Montaigne.

† This honourable place of woman in a people of Oriental stem is very remarkable. But in the British Museum the passer-by may see at a glance the Etruscan wife, sitting at a table with her lord, equal in sepulchral honours, etc.

‡ This dominion of the household has persisted among the Latin peoples to this day; it is said that at one moment the old Marquis de Mirabeau had every member of his family under lock and key. Another side of the matter is that the love of home has never, it is said, been more intimately expressed, even by English poets, than in poetry or prose by Romans—as, for instance, in the Eclogues; one may note especially the charm of the old country home on the Mincio.

§ Pliny's story is that Xerxes brought with him a magus called Sothanes, whose influence penetrated widely in Southern Europe; "qui velut semina artis portentorae insparsit."

demonology, probably even of Sumerio-Accadian origin. In the light of our modern knowledge of the wide and frequent diplomatic intercourse brought to light in the records of ancient Egypt, it is not to be supposed that these hoary ideas did not reach and affect the Western peoples, in degrees of more or less, as their respective avidities might be. On the other hand, however, I think that the recent discoveries in Egypt, in India, and even in China,* may tempt us to attribute too much of Western culture to Oriental origins and ideals. The general truth is that, Christianity apart, Oriental thought has been sterile and, for us, vain. It has often coloured but it has never formed Western thought, scarcely even in Venice. The Moslems of Spain, brilliant ambassadors of culture as they were, made no great contributions to the sum of knowledge.

One of the most pregnant conditions of the diffusion of culture was by the immemorial consecration, for security of market and travel, of certain central marts and places of congregation, such as Dodona, Delphi, Delos, Ammon, Mecca (long before Islam), and, in less awful sanctity, Hebron, Zion, Tadmor; international refuges, each under the ward of a great god, or of an ancient and wise king, such as Melchizedek or Solomon, and often, as at Dodona or Delphi, the seat of an articulate organ of Divine messages to mankind. Homely as the primaeval Romans were, we may be sure that the voices of the Oriental merchants, sages, and soothsayers penetrated even to that secluded nest of its mighty brood, already nursed in the augury and haruspicy of the Etruscans, a divination which, however, in nature and character appears to me rather as a kind of natural research than of witchcraft. That in his early ages man should be attracted more by rare incidents than by common sequences is not surprising. A chicken born with three legs was a sign from the hidden powers of Nature; the Roman Senate was summoned for its interpretation, as the Royal Society congregates to muse upon radium. The augurs were a college of scientific experts; and deflections in the flight of birds or in the currents of occult life in the entrails were phenomena significant of the working of larger causes in which man was deeply concerned. The people who best could read these signs must therefore prevail. Unfortunately the Roman, like other augurs, learned to love authority more than prophecy; and Ménière surmises these priests were adepts in anatomical tricks, such as of bleeding from carotid or jugular vessel as they chose.

> Nec cruor emicuit solitus, sed vulnere largo
> Diffusum rutilo nigrum pro sanguine virus.
> LUCAN: *Pharsalia*, i, 614-15.

The study of religion and superstition is far too vast for this occasion, albeit its influence upon folk medicine was too considerable to be dismissed without a word. Theurgic methods in the infancy of human societies can hardly be called superstitions; they belong to that provisional framework of custom by which early societies are integrated and bonded together; and, if in Rome theurgic and other rituals have had a longer reign, we must remember that the mission of Rome has been one of integration, subordination, and rigid consolidation, not of revelation. In its classical place in Livy (vii, 2–3) we read of a great holy feast to gods during a severe pestilence in the sixth century—eight days of it, to Apollo, Latona, Diana, Hercules, Mercury, Neptune, with religious drama and dances. When this failed, the curious, apparently Etruscan rite† of driving a nail into the temple of Jupiter would be performed. The curse of Rome, the malignant pestilences, often no doubt the plague itself imported by traders, or perhaps the first invasions of malarious disease upon a people not yet even partially immunized, or again the commoner infections envenomed by foul conditions of life (though in the reign of Tullus Hostilius, and earlier, the conditions of a scanty, hardy, outdoor population cannot have been very foul), blow upon blow, and time after time, smote and devastated Rome, sometimes "killing without illness," many times destroying both men and cattle, or blighting even trees and crops also, they drove the people into gloomy terrors during which these public rites, horrible as some of them were—such as the well-known immolation of 120 women—at any rate saved them from despair.

Down to the time of Cato, the application of natural, and the invocation of supernatural means lent, each to the other, supplementary and material aid. In the gathering of simples some peculiarity of form, colour, odour, or other strangeness of feature or outlandishness of habitat gave it, as I shall note presently under signatures, a hold on the attention; yet in the culling of the herb, or the brewing of the potions, were also to be regarded the mystic influences of the seasons of the year; of saints' days, such as the Eve of St. John; of the new birth of spring or the decay of autumn; of the influences of the hours of the sun, of the phases of the moon and of other heavenly bodies and constellations; of heat and cold, dryness and moisture; of the congruities of numbers, of precatory patter, and so forth.‡

Of supernatural or magical observances the more specific were "binding and loosing," the virtue of laying on of hands, the potency of names, lustrations, holy wells, dreams and their interpretation, temple incubation with its corresponding donaria, and the fantastic notions of signatures and symbolisms, of sympathy and analogy, of talismans; all of these observances entered deeply into early Roman as into other folk medicine of those and of later times. Remnants of them survive amongst ourselves, especially in the conservative functions of our churches, and beside the sick bed of helpless man, where the grosser kinds of mysticism still endure and even flourish. It were well indeed if we could say that from the practices of modern medicine they were wholly banished. No wonder, then, that magical and occult ideas and practices entered into the very framework of Latin medicine, not in the crude times of the Republic only, but, in rising and falling tide, in the earlier Empire, the later Empire also, and during the ages we call "dark." The demonology of Roman folk-medicine carried its pedigree back far beyond Endor, has propagated its kind through the Middle Ages, and in the "morbid entities" of our own nosologists has still its pale survival.

That amid these oracular, ceremonial, mystical, exorcistic, and occult agencies of magic and practice the priest had a chief place, as the necessary mediator and interpreter, was (as I have shown, p. 1453) a far stronger motive with the Roman than with the Greek people. It has been pointed out from the Coan and Cnidian Sentences how early in Greece were the indications of the detachment of professional from folk and theurgic medicine; and negatively that in all the various books of the Hippocratic Canon temple medicine has barely an allusion. To this independence I shall refer again presently. In Greece the theurgic invocations of Apollo Paeon, of Chiron, of Aesculapius, seem soon to have become, as in the Oath, rather of the drapery than of the body of medicine. "Church was one thing, common sense was another, and he wanted nobody to tell him what common sense was"; is there not a flickering light of human kinship between Hippocrates and Mr. Tulliver? Even in Celsus the shapely adolescent form of scientific medicine, if then becoming more acceptable to the newer and culivated Roman, was notwithstanding in temper wholly Greek; to the Latins it owed nothing. But in Rome, during the Republic at any rate, theurgic, or hierurgic, or incantatory§ craft was of the body of it; drugs and operations were but auxiliaries. To understand Roman medicine aright, therefore, I must touch, however briefly, on some of the chief of the miraculous observances to which I have referred.‖

Binding and loosing, a kind of magical enthralment, or a throwing of function in and out of gear, had obviously its direct medical application to childbed; and also to maladies of the kinds of hypnotism and hysteria. The very ancient goddess Carna was primarily the warden of lock and key, and thus became the goddess of the lying-in chamber; then of the strength of the stomach, and so on. As the method, from early ages, as recorded

* In the reign of Trajan a Chinese general reached the Caspian and tried to open up some intercourse with the Romans. Pliny the Elder recognized (N. 4, xii, 19) the function of trade in the diffusion of ideas.

† This observance (primarily an almanac(?) but the links are obscure) is traced to the Volsinians, and to the Etruscan goddess Nortia (vide *Mitth. Gesch. Med.*, 1904, p. 200). I do not think the alleged secondary link with the virtues of the nails of the Cross has been verified.

‡ That to the selection of herbs early man was guided, as Haeser suggests, by some instinct seems improbable; though no doubt he was aided by some rough empiricism.

§ Vide *Odyss.*, xix, 457.

‖ In these paragraphs I am indebted to the various essays of the late Professor Hugo Magnus, especially those which appeared in the *Abhandlungen z. Gesch. d. Medizin*, and to the well-known treatises of Deubner and Weinreich.

in cuneiform script,* down to its attenuated survival in modern rituals, was intimately connected with the laying on of hands, or the sign of the hand, it is difficult to consider the two methods separately. For instance, in childbed loosing was often done, or signified, by a laying on of the hands of the healer, or by a gesture of the hand, so that in Greek χεὶρ and δύναμις became equivalent; furthermore, in many legends, as in modern hypnotism, it is not easy to perceive whether the manual act were one of a stream of virtue from the healer to the patient, or a manumission, or a protective gesture; or, indeed, as in not a few cases, medically operative. For example, in childbirth the hand of a god may be laid upon the abdomen, so that from it the solvent virtue may flow into the womb; or the act may be only symbolic, as in the idol of a goddess of fecundity found at Cnossus—I take this instance as carrying us back to the Pelasgian people—in which the elevated right hand is widely opened; the left, for the left hand had even then its sinister potency, being closed. The Eileithyiae are often represented, upon the so-called Etruscan vases, with the right hand thus raised and opened. To close the fingers would arrest the birth. These daughters of Juno or Hera were, however, always beneficent goddesses, both for marriage (Hera Eileithyia or Ὑτερχείρια) and childbirth. But they are often shown as more than guardians; not only blessing by symbolic gesture, but also laying the potent hand upon the body, or even performing some efficient act. They appear thus on some Etruscan mirrors; and in later times we read in Ovid of Leto's childbed (*Met.*, x, 410).

> Constitit ad raucos mitis Lucina dolentis
> admovitque manus et *verba puerpera* dixit.

Now Soranus said that the pangs of childbirth are mitigated by the laying on of a warm hand. But this very ancient hand magic was by no means confined to midwifery. Chiron, Hygeia, and Apollo had the attribute of ἡπιόχειρος, which passed on in later tradition to the hand of the Mother of God—χεὶρ τῆς παναγίας. For instance, the Dioscuri, Asclepius, Serapis, Cosmas, and Damian, thus saved from sickness, as also from storm at sea;† and still the modern Italian mother takes her sick child to the little circular church of "San Toto," at the foot of the Palatine, where, perhaps, at this very temple, the old Roman mother used to invoke the Great Twin Brethren. Such gestures were used also for maleficent purposes (mala manus), especially, as I have said, if delivered with the left hand; of this side of belief we find abundant evidence in sources so different as Petronius and the Acta Sanctorum. Asclepius would thus use his magical powers, generally during incubation. In an Epidauric inscription so late as the fourth century A.D. he is said to have laid his hand upon the body of a sterile suppliant, who gave thanks for the son she came thereby to bear. By raising the eyelids with his fingers he restored a blind man to sight; and in another patient by stroking the hand he dissolved (a Dupuytren's contraction?). And, as I have said, by means more specific than gesture this god of Medicine often showed his good-will: to one he holds out a potion, another he anoints with a salve; or he performs an ablution, even with a sponge ("nescio a quo deorum spongea corpora sua pertergeri": Val. Max., ii, 4, 5); or with his miraculous hand he does swiftly an operation which the mortal physician achieves far more laboriously (Weinreich). St. Eligius, patron of a street near my own house in Cambridge, cured a dumb woman by snipping the bridles of her tongue "cultellum etiam vel forcipem, in specie medici manu gestans" (see Vita St. Eligii: in Migne). Similar manipulations were still related of the mediaeval Saints, as by Gregory of Tours, by Cosmas and Damian, Cyrus and John, and others. Apparently concerning malaria, in an inscription of the earliest years of the Empire found in the Asclepieion of the island of the Tiber, the donor sets up his εὐχαριστήριον [Α]σκληπιῷ θε[ῷ] μεγίστω [σ]ώτη[ρι] ευ[ε]ργέτη· "ὄκνο[ν] σπληνὸς σωθεις ἀπὸ σῶν χιρῶν."‡ How by these Epiphanies and miracles Julian, and many of the neoplatonists, endeavoured to identify or to connect Asclepius—known from ancient times as mild (ἤπιος = mitis)—with our Lord is well known.§ Proclus, in his Hymn to Athena, sings:

> "ναί λίτομαι, βασιλεία, κὰι ἀμβροσίῃ σέο χειρὶ
> "παῦσον ὅλην κακότητα μελαινάων ὀδυνάων."

And, thus figuratively, potent medicines received the name of the "hands of the gods." Plutarch says, "Τὰς βασιλικὰς κὰι ἀλεξιφαρμακοὺς ἐκείνας δυνάμες, ἃς θεῶν χείρας ὠνόμαζεν Ἐρασίστρατος."

Scribonius Largus also, in his Preface, says of Herophilus, "fertur dixisse medicamenta divinas manus esse," etc. Alexander of Tralles gives this title to an infallible remedy against stone of the kidney (A. v. T. ed., Puschmann, ii, 466); and Weinreich states that in the current *Pharmacopoeia Danica* is a "Guds Haands Plaster." How by the touch blindness may be cured, or inflicted we know not only from such familiar stories as of Teiresias and Elymas—sometimes with the aid of ashes or water from the altar, or of spittle,‖ or of holy relics, or of clay, but we find the same procedures in inscriptions at Epidaurus, in the Asclepieion of the Tiber, and in the Asclepian temple attached to the baths of Diocletian. In the *Vita Hadriani* (quoted Weinreich) we read "Venit de Pannonia quidam vetus caecus ad febrientem Hadrianum, eumque contingit. Quo facto et ipse oculos recepit, et Hadrianum febris reliquit." Similar miracles are recorded of Vespasian, in the Serapis temple at Memphis, who may have believed as much or as little in his royal touch as Queen Anne did.¶ I may add, however, the story from Pliny (*Hist. Nat.*, vii, 20), how Pyrrhus, by the touch of his great toe (cujus tactu) "*lienosis*** medebatur." Pliny (*Hist. Nat.*, xxviii, 43) speaks of the cure of epilepsy, "Si virgo dextro pollice attigat"; and Alexander of Tralles of the ἰατρικὸς δάκτυλος (ii, 199, Ed. Puschmann). Thus the virtue of the hand might emanate from any limb, or from the garment or a relic; but the magical virtue of the thumb or the great toe was more than this. These parts, by the analogy of form so catching in early times, had a phallic significance. Under the name of thumbs of this saint or that the emblem, in wax, is, I believe, at this day commonly sold in the nearer East, especially in Italy on the feast days of SS. Cosmas and Damian, to sterile women, or as a votive offering. Sir William Hamilton at Isernia noted this practice also on St. Januarius's Day. St. Thomas Aquinas cured a blind man by the simple device of allowing the patient to kiss his foot, a prerogative shared with Popes and Emperors.†† It was by this pedigree that the royal touch came to us in England, and it is illustrated by certain ancient Gaulish and Spanish practices of royal touching for jaundice, plague, or insanity.

To the evil of the sinister hand I have referred; but I may remind you also of the perilous stroke of the god, or ghost, of which, among many instances, that on the hollow of Jacob's thigh is the best known. To such a blow the Arabs attributed the "divine disease"—epilepsy; and the legend of the Incubus belongs to the same line.

On the magic of *Names*—that to discover the name of a person is to obtain some power over him, or some intimate access to him, is an ancient notion scarcely yet extinct. Patients, by no means confined to the ranks of the hospital classes, feel that if they can get hold of the name of a disease, they thus penetrate nearer to its essence and obtain some greater measure of control over it. In Jacob's conflict it will be remembered that his supreme effort was to learn the name of his mysterious antagonist. This power of the name, too general a belief to need farther allusion in this place, was in full force in ancient Rome. Naming and Binding were often associated; even down to the later Middle Ages impotence and sterility were to be conveyed by tying a knot in a cord with incantations and naming the person.

* Vide Oefele in Puschmann's Handbook.
† Vide Deubner, *Kosmas u. Damian*, Leipzig, 1907.
‡ Besnier, *L'Ile Tibérine dans l'antiquité*, Paris, 1902.

§ Vide Mau, *Die Religionsphilosophie Kaiser Julians*. Leipzig, 1908, quoted Weinreich.
‖ How ancient are the virtues of spittle, especially of fasting spittle, I need not stay to illustrate—for example:
"Foot, foot, foot, is fast asleep.
Thumb, thumb, thumb, in spittle we steep," etc.
¶ It was, I think, in the time of the Georges advertisements appeared postponing dates for the suppliants, as "the King wanted a holiday from healing."
** Italics mine, to indicate the malarious connotation.
†† Troels-Lund (loc. cit.) says the fingers of dead thieves stolen from the gallows were preserved in brandy for their healing virtues.

The magical virtues of *numbers* are too well known to require any long description in this place. In early stages of thinking numbers were confused with ideas and with causation; they gave to phenomena and to causation a sense of uniformity and progression. Moreover, they were verifiable, so that by them all things might surely be measured; and between measure and law the distinction was misty. Certainly in music and in astronomy numbers were of striking validity; and, if so, why not in the bodily courses, in physiology and disease. Times and State functions also appeared to bring about their own fulfilment, and this with a majestic procession which must have seemed to depend on some intrinsic potency.

Lustration in Rome, with its traditions to the present day, is a long story. Mr. Warde Fowler says the root idea of *lustrare* is *luere*—to get rid of something, primarily of hostile spirits. Certain events need certain piacula, and then—the trespass may be continued. It contained no sense of regeneration.

Incubation, or temple sleep, long prevalent in Rome, was too ancient a practice to be described in these lectures as distinctively Roman. On this practice in Greece I may refer to my portion of the article on Greek Medicine in the Cambridge *Companion to Greek Studies*. Dreams and their interpretation belong, of course, to the most ancient and universal of the beliefs of mankind. Yet, as I have said, to the lucid intelligence of Greece proper, and in particular to the Hippocratic schools, this ancient illusion was becoming less and less substantial. It is remarkable how little trace of magic there is even in Homer, medicinally speaking; Apollo's arrows and the expiation are another matter; this process, indeed, had in it a strong element of worldly justice. In the *Odyssey* (xix, 45) it is true the haemorrhage of the wounded hunter is stayed by "ἐπαοιδῇ." In Aristophanes (*Ploutos*, ii, 620–21 and 665 et seq.) we find these priests of the temple sharply satirized. For the first patient, a poor man afflicted with the *lippitudo*, so curiously common in Rome, the god roughly daubs on an unguent of biting severity (and doubtful efficacy?); while to the blind god Plutus he is far more complacent. With Panacea he wraps the head in a red* cloth, under which the snakes slip in and lick the eyes. Or, again, need I remind you of the well-known passage in *The Republic*, in which Socrates says that to regard dreams seriously is absurd, or even odious; that they are the confused and often ridiculous results of indigestion, and disappear when by temperance the soul, no longer obfuscated by gross vapours, is steady and calm. In the fourth book of the Coan treatise, Περὶ διαίτης, dreams are treated calmly as clinical phenomena.† And I might proceed to show how this lucid and positive Greek temper prevailed in Celsus, in Aretaeus, and even in Porphyry. In Rome, however, under the fair semblance of Hellenic culture, folklore, hierurgy, and the undercurrents of the hungering, bewildered souls of men swept on in a larger volume, gathering still grosser turbidities. In primaeval times dreams were a part of the only available theory of life; in Rome they had sunk into the muddy waters of superstition. Probably the Epidaurian cult reached Rome by direct communication; the not dissimilar rites of Isis (introduced by Augustus), Serapis, Osiris, were of later introduction. But incubation did not become a local and popular custom in Rome until the conveyance of the Aesculapian divinity, or his emblem, to the Tiber Island in 291 B.C., when, by the more national observances of haruspicy and piacula, the augurs had failed to stay the pestilence. But before this translation of the Aesculapian cult, Roman and other foreign suppliants had been wont to seek the god in Epidaurus; and in later history, as in Herondas, we read of its continuing vitality in Cos in 200 A.D., who describes the visit of two women thither, and gives some description of the artistic treasures of that temple. It is said there were eighty temples to Aesculapius in Greece. Incubation was practised, however, in many other temples besides those of Aesculapius; it persisted in some vigour through the Middle Ages, and to this day is practised in many shrines in the Aegean. A notable example is that of Henry II (1003–1024), who, being afflicted with the stone, attended for medical treatment at Monte Cassino. Now a Roman Emperor was an alarming and an imperative visitor; the monks therefore wisely entrusted the case to St. Bernard himself, who in a temple dream operated, successfully, if I remember right, upon the august sufferer.

Haeser thinks that the Aesculapian worship took no deep root in Rome. It is true that authors of the earlier time are rather silent about it, and little or nothing is said of any medical skill among the priests; Galen does not mention it even to attack it; but the same might be said of the attitude of modern physicians towards our own superstitions. The silence may have been—probably was in part—contempt or indifference. Its most flourishing time in Rome was probably that which immediately followed the new local foundation, before the Greek physicians flocked over to compete with their own god; nevertheless, in the time of the Spanish Emperors the shrine was much frequented, and not by the vulgar only. The temple had some privilege of asylum. If a master refused to treat a sick slave, and the slave, making his way to the island, was cured there, he became *ipso facto* legally free. Marcus Aurelius founded there a hospitium rather than a hospital, probably as an annexe to the sleeping portico,‡ and a large and, it is supposed, a valuable library and armamentarium were gathered there. The instruments suggest that some rational therapeutics were in use at the temple, but the records, or testimonials, were probably of no scientific value; indeed, the value of those of Epidaurus, though probably higher, has been much exaggerated.

The votive offerings (*donaria*) were not merely commemorative; they were often deposited in order that there should be no Divine mistake about the organ to be repaired. Thus, images of eyes, ears, and limbs, and of viscera, singly or in groups, the inwards probably copied from sacrificial animals, were offered, as they are offered still abundantly to this day.§ The peculiar golden offering of the Philistines recorded in the sixth chapter of the First Book of Samuel comes at once to our minds. In the Savile Collection in the Nottingham Museum is a terra-cotta from the Nemi temple of a woman with the breast laid open so as to exhibit its viscera. It is attributed to a period between 300–150 B.C. (No. 131 in the Wallis Catalogue). Effigies in terra-cotta of eyes, ears, and other limbs, are dug up in modern exploration by the bushel. The votive offering which has perhaps the most ancient, certainly the most curious, history is the effigy of the uterus. For times beyond date this viscus has been regarded as an animal endowed with independent life and motion, and as using them to range over the inwards. It was customary in Hippocratic times to use both abdominal palpation and vaginal inspection to ascertain its temporary habitat. This donarium, found not in Southern Europe only but also of northern provenance, as may be seen in the Nuremberg Museum and in not a few Roman Catholic churches of the north, was usually made of metal—of iron or lead; or perhaps I should say that those made of metal have not perished. In form it was various; usually a quadrupedal tortoise-like creature, but sometimes newt-like in shape, or even crocodilian.

In Roman times the dreams, according to Cicero and Posidonius (*De Divin.*, i, 30, 64), were of three classes: the first class, which the *animus* provided for itself, with no more than the cognizance of the gods; the second, due to the haunting of aërial spirits, in which were some "notable elements of truth" (insignitae notae veritatis); the third, and imperative, by which the gods spoke directly with men, the *θεῖοι ὄνειροι* of Hellenistic authors.‖ And here it may be observed that the chthonian deities were local—parochial, so to speak, and were to be sought each

* Red is a colour of ancient magic. Thus a red thread is a magic clew.

† The so-called Epistles of Hippocrates are, of course, apocryphal.

‡ The Aesculapian asylum, founded A.D. 154 on the Appian Way, was not a hospital, but what we should call an almshouse.

§ Vide Art. Donarium, by Homolle, in Daremberg and Saglio, *Dict. Ant. Gr. Rom.*, 1892.

‖ The relative place of temple practice in the evolution of ancient medicine, and the proportions of miracle to professional and rational methods, are really unknown. This question I have dealt with elsewhere. M. Cavvadias, with whom I once incidentally discussed the subject, seems, or did seem to me, to lay too much stress—or more stress than medically instructed historians would be disposed to do—on the temple as the source of Greek medicine (vide Τὸ Ἱερὸν τοῦ Ἀσκληπίου. Athens, 1900). To speak, as some modern historians speak, of Asclepius as only a great physician glorified, is mere guesswork. In Homer he is indeed spoken of as the father of Podaleirios and Machaon, Paean being the god of Medicine; but at any rate in the Homeric hymns (say 500 B.C.) he was a god—*θέον καὶ ἰητῆρα νόσων*.

in his own abode; the Olympians, being more universal, could be sought and could appear anywhere. Thus the Epidaurian god would vouchsafe to appear to a dreamer in Rome; Marcus Aurelius seems to have been at Gaeta when the god in the dream prescribed for his haemoptysis and vertigo; and St. Gregory of Tours, if I remember aright, appeared to a certain calculous personage in a dream in St. Andrew's Church at Patras, when his stone promptly clinked into a glass vessel. Dreams were, of course, the vehicle of counsels and prophecies of all kinds, but it was in the incubations for healing of disease that they became especially popular; and thus under the earlier and later Empire,* and indeed from early ages through Rome to mediaeval times, as we read in late Roman authors such as Aetius, and in Christian hagiology, dream medicine had a wide and enormous vogue in Europe. Although Christian bishops dethroned ancient gods for later saints, such as Cosmas and Damian or Cyrus and John, yet Aesculapius was one of the last of the gods to vanish, and under change of name the practice continued. In Rome, however, the practice (*ἐγκοίμησις*) gradually settled upon the lower and more ignorant classes of the people. Occasionally incubation was performed vicariously, even in ancient times, as related by Herodotus (viii, 134), by Strabo, and many later writers. To rarely favoured suppliants, indeed, Asclepius might extend relief even without the formality of *ἔγκλισις*. The physician made use of the dream in two ways: watching the patient in sleep, he sought clinical evidence of his malady, while also he partook more or less, no doubt, of the belief in the method as a means of medical aid. This aid might be given either directly, as we have seen, by the hand of Apollo or Asclepius, for at Epidaurus the cults of Apollo and Asclepius were united—or indirectly, by observance of certain divine commands. So strong was the tendency, especially in Rome, to categorical personifications that in many temples of Asclepius statues to Oneiros and to Hypnos Epidotes have been discovered, or are recorded by Pausanias.† Antoninus Pius, when in Epidauros he built a bath to Asclepius, built also a temple to the *θεοὶ ἐπιδῶται*.‡

Some dreams were verified by earthly residues; leeches were found in the couch, or a fig, or a bandage, and the like. In later times these records became more and more stupendous, especially in the Christian hagiology. Deubner tells us of a severe operation performed by Cosmas and Damian upon so reluctant a patient that Damian had to hold him fast while Cosmas applied the knife. Weinreich narrates a less happy operation in which a certain saint put on a leg the wrong way, so that the toes pointed backwards.

In the Dream the god might appear personally in his "noble manly beauty," sometimes accompanied by his daughter Panacea, or in the shape of an attribute. Thus Asclepius might appear with a snake or as a snake:

> Vertar in hunc, sed major ero, tantusque videbor
> In quantum verti caelestia corpora debent.
> OVID: *Met.*, xv, 661.

It was in the form of a snake that, to avert a plague which had proved to be beyond human skill, after opening the Sybilline books and consulting the Delphic oracle, he, or some of him, was conveyed to the Tiber Island, with all the oracular precaution and processional pomp which in all times have accompanied the removal of a shrine, as in the travels of the ark of Moses, of Serapis, and so forth. *Ἄγειν ἐφ' ἅρματος* was the formal phrase of it.§ Thus, was the cult of Asclepius carried to Athens in 420 B.C. And it is no less well known how terrible a punishment might fall upon one so unlucky as to err in any point of the ritual; for although our concern is for the moment with the beneficence of the gods, yet in every degree, from mere aversion of the countenance to vengeance not only upon the sinner or scoffer but upon the hapless blunderer, their maleficence was as notorious.

The snake itself from the earliest times has been regarded as the symbol of healing, possibly from its "chthonic" (phallic, seminal, *ἀλεξίκακος*) associations (Weinreich); or as the emblem of eternity; or, according to a scholiast of Aristophanes, because of its quick sight (*δράκων = δέρκω ὅ ἐστι βλέπω: ὀξυδερκες γὰρ τοῦ ζῷον*). The chthonic nature of the snake is well attested by its association with waters and wells, as illustrated by Robertson Smith in the *Religion of the Semites*, and by Dr. Frazer in his *Pausanias*. Weinreich, however, is disposed to think that the association may have been more or less indirect, as waters of healing would be under the patronage of Asclepius and his snake. The mystical confusion between Asclepius as a snake or with snakes, a confusion or transition typical of all these early emblems, had its conveniences, as we read in the legend of the Tiber Island. The wily priests of Epidaurus, in consenting to part with the snake, "reserved" the question of a bestowal of the god himself, while in his turn the Roman ambassador maintained a contrary "reserve" towards the Roman people.

Into the large chapter of the healing properties of waters, baths, and *holy wells*, if I enter at all I must make a separate excursion; but as they played a very large part in Latin medicine, I must not fail to call them to your remembrance. In them chthonic gods naturally have their abodes; and to them, as to the temple shrines, votive offerings were made, and indeed are still made in the form of the pins, rags, small coin or shells, which many of us have seen in and around holy wells at this day.

Strong evidence not only of the persistence but also of the increasing influence of the Asclepian cult in Rome under the Empire is the development therein of new qualities, such as are to be noted on the testimony of no less a witness than Galen, who in a remarkable passage speaks of *ὁ πάτριος θέος Ἀσκλήπιος* as the patron of song and drama which warm the blood; and also, for the like advantages of health, of military and other gymnastics, and of riding and hunting. Weinreich quotes an apt passage from Iamblichus,‖ who speaks of the many such wholesome methods and inventions of the god. Ritter v. Rittershain (*Med. Wunderglaube u. d. Inkubation*) also speaks of the Asclepius of this period as "Vater der Heilgymnastik," and, whether by miracle or by the advance of the more rational methods of counsel or ordinance, we proceed from dreams, visions, and messages, to similar communications with persons awake, though still perhaps suppliants in the temple. As, however, there is no distinct line between the two forms, and no considerable difference of kind, I need not do more than point out this development of temple medicine. As we have seen by the quotation from Galen, this transition was a note of an underlying tendency to more rational and less superstitious habits and conceptions; although among the baser people the old folk methods were still flourishing abundantly. Mr. Jones, in his well-known studies of malaria in history, is disposed to think that as malaria became endemic the vogue of dream-oracles and other charms became exaggerated even among the cultured classes; nevertheless, Asclepius became in part more and more associated with higher culture; and although it is true that not only his soldiery, but also Marcus Aurelius himself, not only the plebs, but also the aristocracy, still sought the shrine of the Tiber Island or of Epidaurus; yet, for the more enlightened of his suppliants at any rate, the "Iamata," both in feature and content, were becoming more rational. Besides the extant inscriptions, which betray a more trivial, and so a more individual, note with less of priestly editing, we have the evidences of the *ἱέροι λόγοι* of Aelius Aristeides, which, scattered through the literature of the age, have been studied by Wilamowitz¶ and other commentators; and in them Asclepius now appears less and less as the magician and "Wonder-Surgeon" of the old Iamata, more and more as an oracular adviser. It is notable, too, that fewer and fewer suppliants seek him for overt injuries, such as wounds by weapons, blindness, and so forth, and more of neurasthenical persons and those enervated or disordered by luxury and gluttony. Furthermore, in Apollo and Asclepius the qualities of *μάντις* and *ἰατρὸς* were becoming differentiated; as a like modification, both in the kinds of patient, of therapeutical virtues, and of cure, is to be observed in the histories of Gregory of Tours and other mediaeval wonder-workers. Thus,

* Vid. Troels-Lund, *Gesundheit. v. allen Zeiten*, Leipzig, 1907.
† Vide, for example, Paus., ii, 10, 3.
‡ Many of the votive offerings in the Asclepieia were offered to Hypnos (and to Hygeia also).
§ Or *ἐφ' ἁμάξας*; vide Benson, *Class. Rev.*, vii, 185, who refers to Pausanias (ii, 10, 3).
‖ *De Myst.*, iii, 3, 708; (Parthey) quoted Weinreich.
¶ *Isyros von Epidauros*, p. 116, etc.

even in the pre-Christian Empire we find less and less of the amazing operations and magical extempore restorations of earlier times. We learn, indeed, from Pausanias (x, 23, 13), at a later date, in the Isis temples, that cures began to be restricted to invited cases (*οὓς ἂν αὐτὴ προτιμήσασα ἡ Ἶσις καλέσῃ*). Moreover, cures began to take time, and to be compassed by physical means, however grotesque. For instance, to one sufferer is prescribed *κόκκοι στροβίλου*; to another a collyrium made of the blood of a white cock mixed with honey. Not only so, but with Hellenistic influences we find a very interesting advance in the sense of the effect of the *ψυχή* upon the *σώμα*, so that again cures are wrought by the arts of music, the drama, and other psychic stimulants, as in the best Epidaurian period. Now, moreover, the notion of suffering as a purificatory discipline or atonement becomes perceptible. Some of the means of healing seem to have had their origin in old taboos; as in the prescription, apparently malicious, of swine's flesh for the sicknesses of Jews and Syrians;* and this not by Asclepius only, but also by Cosmas and Damian (Deubner, loc. cit.), Cyrus and John (Migne), and other magical healers who succeeded the god in his functions. Some modern commentators go farther, and read into certain of such legends meanings of an allegorical or suballegorical kind. It is but fair to the memory of the Christian saints to add that pagan legends of cures, too often of a loathsome kind, were largely carried to their discredit by the undercurrents of folklore. Weinreich explains the flocking of the sick to the shrines of Asclepius of Serapis, and of Isis, whose cults made their way into Rome by their healing attributes,† and those of Apollonius of Tyana in the reign of Titus, to a progressive decay of the medical profession; an opinion which, as concerning the age of Galen at any rate, seems to me to be imperfectly justified.

Even favourite animals for sickness or injury were brought before these temples, as many votive offerings in the Tiber temple of Asclepius testify (Besnier, loc. cit.). A similar broadening, both of medical and humane conceptions, marked also, as we gather from Philostratus, the miracles of Apollonius; and the animal stories of the Pythagorean tradition were thus propagated to the times of Cosmas and Damian, who cured all diseases, not in men only, *ἀλλὰ καὶ κτήνεσι* (Migne, in loc.). And thus we are tempted to recall St. Jerome with his lion which, in Carpaccio's picture, so innocently disconcerted the monks; and, again, the beautiful story of St. Francis and "brother-wolf." This sympathy with the animal creation (*ἄλογα ζῷα*, or *θεοφιλῆ ζῷα*), which we cannot attribute exclusively to the northern races of Europe) grew up under Stoic influence. Chrysippus extended *προνοία* (Divine providence) to all animals (Cic., *De Nat. Deorum*, ii, 64); and Weinreich says that the same tenderness for animals is to be found in Philo. Thus, before the Christian times, out of divine healing, and in the following of Chrysippus, arose a large "Providence (*προνοία*) literature," which was distinctly Stoical, as contrasted with Epicurean, and made its way into the current tracts of morality and edification. Now, Asclepius was eminently an embodiment of *προνοία*; though by degrees even in pre-Christian times the idea of Divine Providence was detaching itself from particular deities. In many temple cures, indeed, the Divine aid is made dependent upon recantation of Epicurean atheism and *ἀκολασία*, and burning of his books (vide Lucian, *Alex.*, c, 47). That such zeal should have inflamed that august incendiary, Gregory the Great, and some of his meaner successors, is one of the calamities of history.

Considerable as was the part of *Talismans* (*τελέσματα*), in which one may include magic pictures, idols, and emblems—such even as some of the sillier of our own women buy this day in Bond Street—yet I must not detain you on so familiar a part of the subject. In Southern Europe we still may see statues and pictures worshipped as benefactors, receiving votive offerings, or gilded or enamelled with gems, as in S. Antonio's temple at Padua, in Naples, and even more eminently in modern Greek churches. The conception of deity became in popular idea condensed from the abstract into the image; so that by his god the worshipper actually meant the image itself:

> "*κοίνον δὲ λόγον ἔχουσιν οἱ θεοὶ καὶ τὰ ἀγάλματα αὐτῶν.*"
>
> Artemidorus, *Oneir.*, quoted by Weinreich.

If we may believe Lucian, such effigies, if neglected, would at times, like the ivory Hippocrates which belonged to the physician Antigonus, make themselves extremely disagreeable; even so far as to take to what undergraduates call "ragging" expeditions. This angry image, when annoyed, not only walked the house of a night, banging the doors, but forgot himself so far as "to make hay" in the medicine chests. It is no matter for surprise, then, as we learn from Pausanias (for example, vi, 11) and from Lucian, that such potent effigies were especially trusted for the cure and warding off of fever; and thus, by the direction of oracles, or for expiation, statues were erected to stay or prevent epidemics.‡ Plutarch tells us that Sulla carried about a golden image of Apollo as a talisman. Even in Christian apologetics these wonders were not so much called into question as attributed to demons, the demiurges who, as Plato says, ministered to God in the creation of the world; and, 200 years after Christ, Apollo had still his suppliants against the plague. At this day, indeed, in the Tyrol small stamp-like pictures of the Madonna (*ἡ παναγία*—Bona Dea—Dea Mater) are sold in the streets, and, according to the severity of his case, the suppliant tears off and swallows the proper number of them. Again, in incubation, the god Asclepius, or Serapis for example, would appear frequently as a statue, or in a grotesquer shape, extending his aid *ὥσπερ κάθηται τῷ σχήματι* (Deubner). Marcus Aurelius thus invoked, and saw, Asclepius. Comparetti, in his interesting book on Virgil, compares his fame as a magician with the strange Byzantine prophet Apollonius of Tyana, with whom indeed in the Middle Ages his name is often coupled. In the *Golden Bough*, Dr. Fraser points out that Moses's Brazen Serpent was a talisman;§ and often, on the ancient magical notion of "similia similibus," the very means of hurt becomes the means of healing; as the mouse was a talisman against plague, crabs against ulcers, verminous emblems against plagues of vermin, the yellow plover against jaundice, a spider necklace to extract spitefulness, and so forth. Many such instances and practices can be found in Pliny and in later, even medical, authors, such as Alexander of Tralles, who had a profound belief in the efficacy of magical recipes, amulets—even in the form of living animals, and other "*φυσικά*." Gold, as we have been learning anew in the *Ring of the Nibelungen*, is chthonic and magical; and was used therefore for rings and other emblems against diseases and misfortunes.

The doctrine of *Signatures* is too well known to need more than a passing allusion. As of Omens, that of Signatures was tentatively science, though of incredible *naïveté*. The *Geister der Pflanzen*,‖ it declares, are revealed by forms or marks. This plant—euphrasy, for instance—has the form of the eye; another resembles the ear, another the tongue, and each has its virtues corresponding to its sign. That plant, being like a snake, is accordingly poisonous; or again another, having the marks of a snake on its leaf, is an antidote to poison. In this, as in many other modes of fanciful symbolism, the clews are often lost; we cannot tell how or whence the notions originated, or if, indeed, they sprang independently from the fundamentally similar minds of several races in several places. As regards magical or critical *Numbers*, for instance, which, as every physician knows, have entered deeply into medical system and prognosis, very deeply even into Hippocratic medicine, whether among the Chaldeans, among the Jews of the Old Testament, among the Chinese, among the Pythagoreans, and in other peoples and schools, they originated independently, or were propagated by intercourse, no one can now say.

Analogy and Sympathy.—Analogy must predominate in man's reasoning before he is trained to search for affinities in deeper resemblances, and before he possesses a body of knowledge. Even in later times analogies come

* Vide, for example, Robertson Smith, *History of Semites.*

† As recorded by Tacitus (*Hist.*, iv, 81), Suetonius (Vesp. 7) and Cassius Dio (lxvi, 8).

‡ The association of Apollo (Smintheus = of the mouse) with plague is a very ancient belief (vide Homer, *Il.* A).

§ See also Robertson Smith, loc. cit.

‖ Schlander, *Aberglaube des Mittelalters*, Breslau, 1858.

only too readily to save us the trouble of hard thinking and trying. The doctrine of Signatures is an eminent case of the analogy conceit. Analogy was strictly an imperfect logic, whereas Sympathy, speaking as strictly, consisted in a mystic transfer of some virtue. Still in particular instances it is often difficult to distinguish the two ideas. When Lucretius argued from dust in the sunbeam to the atomic constitution of matter (ii. 113), or when Heraclitus, with infinite effect, assimilated the living principle to wine and its spirituous vapour, they argued by analogy. But the Greek, even in his errors, was preserved from extravagance by his sense of proportion. In our own times, if in the sphere of science we have learnt better, and not to apply the methods of one kind of problems to those of a different kind, yet in the sphere of the fine arts, for which our aptitudes are less, we fall continually into the errors of analogy: we impute to one art the conditions of another; we carry into sculpture the conditions of painting, into painting the conditions of history or romance, into music the conditions of epic poetry, and so forth.

Sympathy, the transference of a virtue from one agent to another, is a distinct idea. In Pliny, Virgil, Juvenal, we have abundant examples of this curious but popular notion in medicine, many taken no doubt from Cato's *Commentarium*. For instance, from early times down to the Middle Ages, the dreads of impotence and sterility were a nightmare, so that the means of averting or curing the evil were many; and when regarded in the light of the gravity and good faith of the performers, these cures by analogy had not the naked loathsomeness in which, even in authors so chastened as Virgil,* they appear to us. However, passing these by, as a respectable instance I will quote that of the swallow. This bird was supposed to be, of all animals, the acutest in vision, and its eyes to be either invulnerable or capable of regeneration after injury. Accordingly, by the witness of Graeco-Roman physicians, from Celsus (vi, 6) to Paul, and probably long afterwards, swallow's eyes roasted and pounded into a salve, or swallow's blood similarly prepared, were used as a sovran remedy by the oculists. Or again, as the blood was always regarded as the fountain of life, to drink the blood of a warrior, or still better to eat his raw heart, was to transfer his bravery therewith to the consumer. But, as human hearts were not often available, the heart of a savage beast, as of the lion, was regarded as not much less efficacious. I have read somewhere a quotation from the chronicler, Cedrenus, a Greek monk of the eleventh century, that the physician who dissected Cyril cut off and ate the holy episcopal liver. That in consequence his tongue sloughed off ended this story with a dramatic fitness. Of many more such examples I may mention this also, that the blood of a chamois was drunk to cure vertigo.† Thus a craving of decadent men for vicarious or transferable virtues led to hideous abuses—to the procuring of the blood of virgins of either sex, or of children, as in the infamous story of the medical sorcerer who, as it was rumoured in the chronicles of the time, sought to cure the nervous disease of Innocent VIII with the blood of three pure children.

Astrology, that most ancient of Asian mysteries,‡ made no great way in Greece. In the Hippocratean treatise on Ancient Medicine it is vigorously denounced, but in the *De Aeris*, in respect of the behaviour of Arcturus and the setting of the Dogstar, it finds some little countenance. Indeed, in early Rome astrology seems to me to have been less prevalent than other false doctrines, superstitions, and sorceries. We have no doubt the well-known passage of Pliny before us, where he speaks of Crinas of Marseilles, who, besides ordinary medical means, observed the courses and positions of the heavenly bodies, ordering days and hours by almanacks and ephemerides, "as if he commanded all our destinies." The sober Aretaeus, in the latter part of the first century, supposed that the Pleiades produced tides in disease; and astrology made some farther advances under the Empire, acute diseases being referred to the Moon, and chronic to the Sun. In Sudhoff's opinion, Galen, in his tract on Critical Days,§ gave astrology a great material hold; yet, speaking generally, I think Galen cannot be regarded as a propagator of this imposture. In the West the great outbreak of astrology, and of sorcery white and black, was deferred to the thirteenth and later centuries, when it was kindled or fanned by the Arabs and Frederick II, by Arnold of Villanova, and Peter of Abano. That in this later period, not the several limbs and viscera only, but even the hair of the head and the nails of the toes were under the punctilious rule of the stars, was independent of the tradition of Galen or of any others of the regular or irregular professors of Graeco-Roman medicine.

Around these gropings after knowledge, besides these deceptive practices of illusory methods which move our sympathy and prevent our rebuke, stealthily but in dark volume poured in the miasm of charlatanry. Theurgic medicine, as we have seen, was at least some protection against the charlatanry which captured the childlike methods of folklore only too readily: the populace is always too ready to gamble for the profits of service without its discipline and its price. Even in the best Hippocratic period we read of quacks collecting crowds and using vulgar deceits. In the Περὶ εὐσχημοσύνης and in the Παραγγελίαι by the side of earnest counsel to high-mindedness and intellectual sincerity—pleading even for those wicked men, the fickle folk who change their doctors, as ἄξιοι μὲν ἀμελίης οὐ μέντοι γε κολάσιος—we read of the base and ignorant pretenders who cannot or will not comprehend such maxims, but, dressing gorgeously and blowing trumpets, plunder the rich, yet leaving them in evil case.‖ And would this were all. If these things were done in Greece, in Rome not only was the art of medicine thus degraded in manners, but it was dragged into far deeper and fouler mire. Without assailing your ears with scandals of black intrigue and monstrous crime, it is but too certain that not the blatant quack only but even physicians of repute connived at and even conspired in the basest infamies. In the Rome of which we are speaking, there was no standard of qualification; in the words of Scribonius Largus, "Quisque volet faciat medicinam." Physicians, at any rate down to the Empire, were not a professional body, scarcely a specific group; they mixed, a motley gang, in a world of all shades and confusions—"*augur, schaenobates, medicus, magus.*" Good and bad, instructed and uninstructed, freemen and slaves, reputable and disreputable, straight and crooked, honest and profligate; some were loyal and gentle, others sycophantic, avaricious, and treacherous. Of such a crew it is impossible to strike an average. Galen said of them ironically that he who in the race for applause and gain wasted his time on learning was silly. Thus the public was bewildered, and in the eyes not of the satirists and gossips only medicine was brought into hatred or contempt. Satires and plays of public manners, overcharged as they may be, if not fairly lifelike lose their point; and we have only too much sober evidence of the complicity of the physicians in such practices as suppression of births, infanticide, and even murder of adults by poison, to regard the public gibes of Plautus as, even in that early time of Rome, calumnious. When Plautus puts into the mouth of the handmaid Astaphium, "Ne sibi persuaderes Ut abortioni operam daret, puerumque ut enecaret," the threat was presumably taken as a matter of course, though it is fair to add that it was made in respect of a midwife. And it cannot be said that these and such crimes, explicitly forbidden by Hippocrates, prevailed only in a semi-barbarous period of old Rome; with the corruptions of wealth and social profligacy they became more and more frequent and shameless. Before this audience I need but allude to the reprobate Eudemus, brought at last to torture and the gallows as he well deserved, fellow paramour of Livia with Sejanus, and poisoner of Drusus, whose death was one of the unluckiest mishaps of history; or to Vettius Valens, physician to the abject Claudius and parasite of Messalina, a wretch who also came to the bad end he merited; or to the greedy boaster but no less wicked and adulterous

* See *Georg.*, iii, 280; and Juvenal, vi, 133.

† The fear or use of blood, especially of the ox, as a poison (vide *Herodotus*, iii, 15) is another and different notion which I cannot now discuss.

‡ See Troels-Lund (loc. cit.).

§ Zur Gesch. d. Lehre v. d. kritischen Tagen im Krankheitsverlaufe, *Wiener med. Woch.*, 1902. I would refer also to a paper on "L'influence religieuse de l'astrologie dans le monde antique," by Franz Courmont of Ghent read at the Oxford Congress of the History of Religions, 1908.

‖ Wherein we are reminded of the charlatan doctors of the *Spectator* who rode in gilt coaches and dined off gold plate.

scoundrel, Stertinius Xenophon of Cos, who aided Messalina to poison Claudius; or, again, of a lesser order of turpitude—to the swaggering impostor, Thessalus, and his like. The huge fortunes left by these medical adventurers, fortunes estimated in scores of millions of sesterces, whatever these sums may mean to us, speak not only of the unscrupulous rapacity of the Greeklings who hied to Rome to shake the pagoda tree, but also of the ill-gotten spoils and bloating diseases of their patrons. In venality there was not much to choose, perhaps, between Vettius and his like and Crassus, "the great slum landlord." Yet while such evil men were flourishing, men of modest mien and honest, kindly nature, men, moreover, of skill and resource, if less notorious were by no means wanting; such men as Antonius Musa, to whom Galen testifies as the able physician of Augustus and the friend of Virgil,* Horace, and Mecenas; or such as Meges, of whom Celsus speaks as "the very wise," who was the best pupil of Themison, and the first to reduce a forward luxation of the knee,† and to describe carefully certain scrofulous conditions. Of the esteem and affection in which many such honourable and skilful physicians were held we have ample warrant in contemporary authors, as, for instance, in Cicero and Seneca. Seneca has left us a beautiful portrait of his own physician, of whom he gratefully says, "*pretium operae solvitur, animi debetur.*" Perhaps it was during the period of the Spanish emperors, if we may rely on Galen himself, Plutarch, Pliny the Younger, and Dion Cassius, that, superstitious as the period still was, physicians stood highest for probity, skill, and beneficence. By these authors many such men, to us now but *noninis umbrae*, are named with honour and affection.

In the midst of the swelter, towering above all, as great monuments rise above turbid and devouring floods, beacons for their own age and for all ages, stood, and yet stand, the great figures of Asclepiades and Galen, in fame unequal but in the gifts of Nature not unequal. Of these great men, and of Asclepiades especially, I spoke in Lecture II, published in the Journal of November 27th.

ON SOME USES OF OPIUM.

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Amongst the many new sedative remedies which in recent years have been introduced into the market, opium and its alkaloid, morphine, seem in danger of losing much of their traditional repute. As a hypnotic opium has been practically superseded by newer and more fashionable specifics; and as a general tranquillizer of nerve and muscle it has been forced far from the position it used once to hold as the very first in importance and usefulness of our therapeutical possessions.

For the relief of pain opium and morphine are no doubt still resorted to, but even in this capacity their claims are often set aside in favour of antipyrin, aspirin, and other recent analgesics. Unless pain be actually present opium is now but rarely prescribed. It is often forgotten that the drug has stimulating as well as sedative properties, and that as a general stimulant to the nerves, the brain, and all the organs of life its value even for this quality alone entitles it to a high place in the esteem of the practical physician. Opium and morphine are not quite the same in this respect. Of the two it is in the former that the quality is most active. Its stimulating effect is best brought out by the use of small doses given at convenient intervals, for in a full dose the sedative influence of the drug is so decided that any primary stimulating effect passes off too quickly to be noticeable. This stimulating action is well seen in cases of indolent ulcers of the skin and mucous membrane. Such sores which had resisted previous treatment will be found to show a surprising improvement after only a few doses of the remedy. The pale, unhealthy-looking surface becomes red and is soon covered with closely-set granulations, while its secretion changes from a thin serous fluid to healthy-looking pus.

This invigorating influence can be turned to account in the case of obstinate sores occurring in cachectic children. The ulcerative stomatitis which is so common amongst the ill-fed and badly-nourished children of the very poor often shows little disposition to heal, even when treatment is reinforced by a generous diet and healthy surroundings. When repair is thus at a standstill, a few drops (2 to 5) of laudanum given twice a day quickly induce a welcome change in the local conditions, and start an improvement which goes on smoothly to a cure. I have had lately under my care a case of gangrenous varicella in a child 12 months old. When the patient was admitted into the Shadwell Hospital the sloughs had just separated, leaving a number of clean-cut and very deep ulcers on the child's back. The sloughing process had gone completely through the skin and subcutaneous tissue to the muscular layer beneath them; and the sores had an angry, unhealthy look, and seemed little disposed to heal. An iodoform dressing was ordered, and 1 drop of laudanum was given every four hours. Three days later the appearance of the ulcers had quite changed; the unpromising look had passed away, and healthy granulations were beginning to show themselves at the bottom of the hollows. The opium was continued, and the sores were dressed with zinc lotion. On account of the depth of the pits they were able to fill up but slowly, but improvement went on without any break, and at the end of four weeks from her entrance the child was discharged from the hospital as cured.

Opium exerts its influence by means of the nervous system, through which it gives energy to the capillary circulation, and affects to some extent every organ of the body. There can be no doubt that the circulation is stimulated by the remedy. The feet become warmer, and the resistance of the body to the depressing influence of cold is very appreciably enhanced. This primary effect of the drug as a stimulant of the nervous system is a quality the value of which must not be forgotten. The nervous trepidation called "stage fright"—the ill-defined sinking apprehension which is familiar to the orator and the player, and is not unknown to the student as he prepares to face his examiner—may be forestalled and disarmed by a small dose, five or six drops, of laudanum taken half an hour or so before his trial is to begin. Again, the nervous tremblings and depression which may be induced by a shock, and are apt to follow a surgical operation, are amenable to the same influence. The above dose, repeated, if necessary, several times at intervals of half an hour, is usually soon followed by tranquillity and sleep. The same treatment will go far to relieve the distress of dying persons. Under the influence of a few drops of the tincture the painful uneasiness abates, and is succeeded by a period of restful calm, which may be maintained by judicious repetitions of the remedy until the close. Again, the profound mental depression which sometimes afflicts elderly people, making their lives a burden to themselves and to their relatives, may be alleviated by the same means. In this, as in the preceding cases, the drug acts as a stimulant, and something more; it quiets nervous irritability, while at the same time it gives a welcome spur to jaded nerves. There are few cases of nervous unrest in which opium given in these moderate, stimulating doses fails to relieve. Children who have been treated surgically for empyema and wear a drainage tube often suffer much uneasiness while the drainage process is going on. Under this treatment their restlessness is calmed, and they are enabled to bear the continued presence of the tube without showing any sign of discomfort. In all forms of illness in which the nervous system is irritable and perturbed the same treatment will be found of service.

When thus given with a view to stimulation the dose of the drug must be carefully limited, for too large a quantity would defeat our object; and it must be remembered that the susceptibility of the system to the remedy varies greatly in different cases—in adult life as well as in the child. It is wise, therefore, to begin with a very moderate dose, lest, unwittingly, we produce an effect the very opposite to that which we desire. The dose can be repeated at intervals of half an hour until the end we aim at is achieved. In the case of old people with thin-walled

* It has been cogently argued that Musa was the Iapyx of Virgil.

† Professor Howard Marsh thinks what is meant in this passage is a forcing forwards of the tibia in relation to the lower end of the femur, a condition he has seen only twice.

dilated hearts this precaution ought to be observed with especial care; and it is advisable to strengthen the stimulating action of the remedy by the addition of 5 grains or so of ammonium carbonate and 20 drops of sulphuric ether.

Again, in the case of young children the same care should be taken to fit the dose to the susceptibility of the patient. In early life the system is well known to be curiously sensitive to the narcotic influence of the drug. But this sensitiveness must not be taken to imply that in infancy the remedy is a hazardous one, and ought, therefore, to be avoided. It is merely a question of dose, for in suitable cases the drug can always be given with advantage if the proper dose be ascertained. It is safe to calculate the dose for infants at ½ minim of laudanum for every three months of life, and this quantity can be repeated every six hours. At the same time it is desirable to warn the nurse never to wake up the child for his medicine or to give it if there be any sign of drowsiness. With these precautions there is no risk of producing undesirable consequences by the remedy.

By the use of opium in very moderate doses we incur less risk of upsetting the stomach of the patient and giving rise to nausea. In some persons, however, quite small quantities will excite vomiting. Should this be so, the evil effect may often be averted by combining each dose of the sedative with a small quantity of capsicum in the proportion of ½ grain of the powder or 5 to 10 drops of the tincture.

When opium is used for its sedative effect larger doses are required. The presence of pain renders the patient less responsive to the influence of the drug, so that care must be taken to prescribe a sufficient quantity to attain the end we have in view. In such cases some uncertainty is often felt as to how frequently it is safe to repeat the remedy, and how soon it may be returned to if the first quantity has proved insufficient. Dr. W. Griffin, who wrote in the first half of the last century, asserted that the full effects of a sedative dose of laudanum become visible within the space of half an hour, so that, if at the end of that time the pain is still unrelieved, the dose may be given again and again without danger, provided this interval between successive repetitions is maintained.

In the case of elderly people who suffer from bronchial catarrh with copious expectoration, the incessant cough makes sleep almost impossible, and the patient seems likely to be worn out by the continued disturbance and want of rest. It is of the highest importance to put an end to the harassing cough and limit this excessive secretion, but the medical attendant often hesitates to prescribe an opiate, lest by doing so he hinder expectoration, and cause a dangerous retention of mucus in the tubes. Whether or not this result is likely to follow a dose of the sedative depends upon the exact condition of the patient. If his breathing be easy, his skin clear, and his cough quite loose, we may give opium with every prospect of bringing relief; but if we notice any lividity of skin, blueness of the lips, oppression of the chest, or other sign of deficient aëration of the blood, opium would only do harm, and must not be allowed. It may be accepted as a rule that in all cases of pulmonary catarrh, until the cough is quite loose and secretion free, opiates are inadmissible in any but the most moderate dose, and only then when combined with antimonial or ipecacuanha wine, and other remedies which tend to promote free secretion from the bronchial mucous membrane.

When given in sedative doses and pushed boldly, opium used to be regarded as a powerful agent in the treatment of fevers and inflammatory conditions, especially those of the abdominal serous membrane. In the old days of antiphlogistic treatment it was the practice, in the first place, to reduce the violence of the complaint by repeated bleedings and the liberal use of mercurials, and then to administer opium in large and frequent doses either alone or in combination with tartarized antimony. The first part of this treatment has long and deservedly fallen into disuse. According to our modern notions, it is founded upon false conceptions of the nature of fevers and inflammations, and if it were ever of service in the treatment of these conditions, which one is strongly tempted to doubt has long since ceased to be regarded with anything but disfavour. But the treatment by opium in full doses stands upon a very different footing, and has much to recommend it. In the case of acute peritonitis—especially that variety which results from perforation of the bowel and extravasation into the peritoneal cavity—surgery, although often of service, has not made us independent of other methods of treatment, or less ready to welcome any help which may reach us from the use of drugs. In the case of peritonitis from perforation it was recognized even in old days that in the collapsed state of the patient bleeding and the lowering methods of treatment were out of the question. The physician therefore proceeded at once to the use of opium, relying upon its reputed influence in reducing inflammation, and hoping that by its power of moderating peristaltic movement it might further the organization and adhesion of effused lymph, and seal up the rift in the bowel. He was encouraged in this treatment by noticing the remarkable tolerance for the drug displayed by patients of all ages when suffering from abdominal inflammations, however great might be the prostration induced by the illness. Dr. Stokes, in an interesting and instructive paper which appeared in the first number of the *Dublin Medical Journal*, instanced the case of a boy of 12 who, although exhausted and collapsed, took with great benefit and without showing any sign of narcotism 4 minims of "black drop" every two hours. This dose is equivalent to 20 drops of our laudanum. As a result of this treatment the improvement was so decided that the boy seemed in a fair way to recovery. Unfortunately at this juncture an aperient was incautiously ordered to relieve constipation, and the action of the dose was followed by a return of the worst symptoms, which this time the remedy was unable to relieve. In all such cases aperients should be carefully avoided however great may be the temptation to have recourse to them. Recovery is dependent upon complete quiescence of the alimentary canal, and rashly to stimulate the contraction of the bowel is only too likely to give a fatal impulse to the disease, and render useless all our previous treatment.

In another case, to a man of middle age, Dr. Stokes gave 1 grain of opium every hour. The patient took 105 grains of the remedy without any narcotic effect and recovered completely. Dr. Stokes maintained that in cases in which the drug acted favourably no toxic consequences arose from its use, and looked upon any such untoward effect as a sign that the remedy had no beneficial influence and had better be avoided. The statements and observations of this distinguished physician have a more than historical interest even in the present day, when the drug treatment of perforative peritonitis has been abandoned in favour of laparotomy and free drainage of the abdominal cavity. In very many cases the change is no doubt greatly to the benefit of the patient, for no one can deny that surgical treatment has been the means of saving many lives which would otherwise have been lost. But all cases of perforative peritonitis are not suitable for operation, and even where this method can be adopted the mortality is high. I submit, therefore, that in all cases where surgical interference is inadvisable, and even in cases in which free drainage has been adopted, the opium treatment might usefully be resorted to, especially as so little susceptibility is shown to the narcotic action of the remedy. I have long been familiar with this tolerance for opium shown in cases of peritonitis even by the youngest infants, and am of opinion that advantage should be taken of it in all cases, for it must be pushed boldly if we are to obtain its full value from the use of the drug.

So far from opium being a remedy inadmissible for infants on account of the susceptibility of the system at this early age to the narcotic influence of the remedy, its value in the treatment of their complaints can hardly be exaggerated. For the relief of spasm its usefulness cannot be questioned. In cases of convulsions in children and also in spasmodic conditions of the larynx, the nervous seizures often yield at once to a small hypodermic injection of morphine. For a child of 12 months old $\frac{1}{40}$ grain of morphine may be used combined with $\frac{1}{100}$ grain of atropine, and the injection may be repeated in half an hour if by that time the spasm has not completely relaxed. The addition of atropine modifies the narcotic action of morphine without impairing its influence as an antispasmodic. Still, where the air passages alone are affected, it is seldom necessary to resort to morphine in the treatment

of spasm in young people, for in grindelia we have an antispasmodic which is superior to all other varieties of sedative in its influence over nervous contraction in those parts. Over general convulsions and spasm of the muscular system generally grindelia has little or no restraining influence, but in laryngismus and stridulous laryngitis its effect is prompt and decided, and in many cases of asthma we find a ready response to the sedative influence of the drug. The only objection to this treatment is the unpleasant taste of the remedy, but this may be covered to a considerable extent by a liberal flavouring with syrup of orange. The most convenient preparation is the liquid extract in doses of 10, 15, or 20 drops every three or four hours.

Opium is of great value in all cases of looseness of the bowels. Whenever it is desired to put a speedy stop to the purging a small proportion of laudanum should be included in the mixture, with the object of delaying peristaltic movement of the muscular coat of the intestine. In cases of colitis where the tenesmus is distressing and the stools contain much blood and mucus, the use of opium by the mouth may be supplemented with advantage by small rectal injections of tincture of opium (for a child 2 to 5 minims) with a few grains of powdered ipecacuanha in half an ounce of thin boiled starch. This injection may be repeated after each action of the bowels.

Again, in cases of cystitis combined with painful spasm of the neck of the bladder, opium is a useful local remedy. For an adult 3 to 5 grains may be combined with 10 grains of extract of hyoscyamus in a suppository to be used twice a day. The internal administration of the henbane alone is, however, a very satisfactory remedy for this complaint, and a dose of 3 grains given by the mouth every four hours rarely fails to relieve all the painful symptoms in the course of a day or two.

Opium is seldom given in these days to secure sleep unless pain be complained of, and not often then. There is much fashion in medical practice, and it is the custom at present to prescribe chloral, sulphonal, veronal, the bromides, and other modern but not necessarily harmless substitutes for the old-fashioned remedy now so unreasonably misprised. These drugs, however, have dangers of their own, and cannot be continued for long together without a more considerable risk of harm to the patient than is to be feared from a course of the older and time-honoured sedative. When given as a hypnotic, and not with the object of relieving pain, opium should be taken two or three hours before bedtime, as it requires this interval to produce its sedative effect, and the dose should always be repeated for several nights in succession. In the delirium and sleeplessness of fevers the drug has a decidedly beneficial and calming influence, and in former times was always regarded as a remedy of the first importance, which could be given not only with safety but with singular advantage, provided the tongue and skin were moist and the pupils not contracted.

It is in cases in which the blood is imperfectly oxygenized—as happens whenever the patient is threatened with coma or apnoea—that opium and its constituents are likely to do harm; and this warning may be taken to apply to all other varieties of sedative. As Sir Thomas Watson used to insist, duskiness of the face or any, even the slightest, tinge of purple in the colouring of the lips should warn us that opium is a dangerous remedy and had better be avoided. On this account the use of opium in cases of acute pneumonia, although advocated by some high authorities, is, I cannot but think, not always unattended with risk. In cases of Bright's disease the remedy is not necessarily to be forbidden. On the contrary, it may be employed with advantage in uraemic convulsions or even in cases of uraemic dyspnoea, for the respiratory distress arises usually from cardio-vascular spasm affecting especially the branches of the pulmonary artery, and great relief is often found to follow the action of the sedative. If, however, the kidneys are unsound, the dose of the remedy should be moderate, for its action is more energetic in such cases than where there is nothing to hinder the free working of those organs. This rule applies particularly to cases in which the urine is scanty and high coloured. Should this symptom be noted, if the distress be not too urgent to admit of delay, it is advisable to increase the freedom of secretion by watery purgatives and alkaline diuretics, and when opium is prescribed to combine moderate quantities of the sedative with the same alkalis in liberal doses.

A fear is often expressed of establishing an "opium habit" if this form of sedative be used for long together; and to this fear may possibly be ascribed the neglect into which this invaluable drug is beginning to fall. But if proper care be taken the danger is surely a fanciful one. When the remedy ceases to be required it should be withdrawn as quickly as possible; and with the exercise of care there is little difficulty about leaving it off, even if the drug has been continued for a period of months. The assumed difficulty arises from the extreme irritability of the nervous system which follows the sudden omission of the usual sedative dose. This is sometimes distressing in the extreme, and many a victim to the drug, although profoundly anxious to free himself from its thraldom, has shrunk from provoking the suffering which he well knows the struggle for liberty will entail. This suffering may be avoided if the dose be gradually reduced until the quantity taken is very small. If then it be withheld altogether, the nervous unrest which ensues is moderate enough to be readily controllable by a few doses of tincture of gelsemium. I have in my mind the case of a professional man who had suffered from a severe attack of subacute sciatica. For many weeks the patient had been treated with hypodermic injections of morphine—using one-sixth of a grain after breakfast, the same quantity after a mid-day lunch, and one-third of a grain at bedtime. Only by such means could the painful spasms of the complaint be controlled sufficiently to enable the patient to pursue his professional duties. At length the attack came to an end. The dose of morphine was then gradually reduced day by day until it was brought down to one-twelfth of a grain at bedtime. It was then stopped altogether and the nervous unrest which followed, although very definite and harassing, yielded at once to a dose of twenty minims of the gelsemium tincture taken at bedtime. This was required on only two or three nights; the nerves then recovered their tone completely.

Young children who have been taking opium for some days for the relief of pain or spasm are as quick as adults to feel acutely the absence of the customary sedative. They show it, however, not by signs of irritability, but by symptoms of threatened collapse. The child lies back with sunken, half-closed eyes, a pallid face and clammy skin, and by his ghastly appearance may excite great alarm. The patient, however, is in no real danger, and only requires food and stimulant to throw off all signs of depression. The best fillip for this condition is a teacup of hot milk containing thirty to sixty drops of brandy.

In the case of morphinomaniacs who have undertaken to cure themselves of the habit and profess that they have done so, the patient's word, unfortunately, is not always to be trusted. If in such a case we are led to suspect that the cure is not as complete as it is asserted to be, Dr. Edward Smith used to advise an examination of the urine for the presence of morphine. He maintained that at the end of eight days from the beginning of abstinence the drug should have passed completely out of the system. If, then, its presence in the water could be detected after that time had elapsed, he took it as a certain sign that the use of the drug was being secretly continued.

WE have received from its author, Mr. Kingsley Fairbridge, a reprint of a speech at the Colonial Club at Oxford on October 19th, which led to the foundation forthwith of the Society for the Furtherance of Child Emigration to the Colonies. The resolution in favour of the formation of such society seems to have been signed by all the members present, including a majority of all Rhodes scholars. The scheme is to raise a sum of £500,000 for the purpose of establishing in Newfoundland a series of farm schools, officered by well-educated men and women. To these schools it is proposed to send children from Great Britain and Ireland who are no older than from 8 to 10 years and still malleable, and to keep them on the farms for about twelve years, submitting them meanwhile to a definite system of education. In anticipation of the foundation of the society, the Prime Minister of Newfoundland is understood to have undertaken that his Government would make a free grant of 50,000 acres of the best virgin land of the colony, together with certain annual grants. Donations may be sent to Mr. Kingsley Fairbridge, Exeter College, Oxford.

THE PITUITARY BODY

AND THE

THERAPEUTIC VALUE OF THE INFUNDIBULAR EXTRACT IN SHOCK, UTERINE ATONY, AND INTESTINAL PARESIS.*

BY

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Two years ago I had the honour of reading a paper[1] before the Liverpool Medical Institution on the calcium metabolism, with special reference to the ductless glands and the female genital organs; and I then indicated some of the lines on which our work was being carried out, and hinted at the results already obtained in regard to the pituitary body. An account of the experiments carried out by Dr. Hick and myself up to the end of July, 1908, was published in the BRITISH MEDICAL JOURNAL[2] early in this year; and although in these papers it was pointed out in what way clinical applications were possible, I have often been asked if we had got any results of practical value. It is for this reason that I now record some of the clinical results dependent on a small portion of that work—namely, the therapeutic value of the extract made from the infundibular portion of the pituitary body.

HISTORICAL.

During the first half of the last century, before the spirit of experimental inquiry in regard to medical problems became the rule rather than the exception, it was the common custom to relegate to the lumber room of scientific knowledge those portions of the human anatomy the functions of which were not apparent. Further, they were "dumped" in the corner reserved for "evolutionary" or "rudimentary" relics.

Now a little consideration, quite apart from experimental investigation, might have led to a very different attitude in regard to some of these structures. For it is self-evident that we have no right to regard as rudimentary those portions of man's anatomy which present, when submitted to a very casual naked eye and microscopical examination, if not a higher and more complex formation than is seen in the lower animals, at least one that is of equal development. In connexion with the structure under discussion, I may point out that there is little, if any, development of the posterior portion of the pituitary body in elasmobranchs, whereas it is well developed in the higher mammals and in man.

It was not until 1894 that the wonderful properties of the extract made from the adrenals were described by Oliver and Schäfer.[3] In 1895 these workers investigated also the physiological effects produced by an extract made from the pituitary body, and certain other extracts, such as those made from the spleen and thyroid.[4] While adrenalin sprang into fame, the pituitary body, which undoubtedly deserves a nimbus of its own, remained with its light hidden beneath the very brains that should have recognized its virtues.

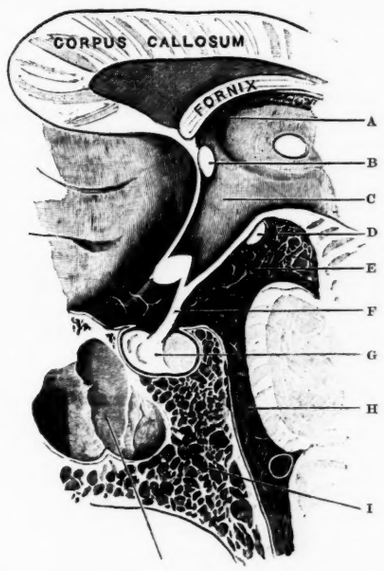


Fig. 1.—Mesial section through the pituitary region in the adult. A, Foramen of Monro. B, Anterior commissure. C, Ventricle III. D, Corpus mammillare. E, Subarachnoid tissue in cisterna basalis. F, Infundibulum. G, Pituitary body. H, Cisterna pontis. I, Basi-occipital. J, Sphenoidal sinus. (Cunningham.)

ANATOMY AND DEVELOPMENT.

The pituitary body situated at the base of the brain in the depression of the sphenoid bone, known as the sella turcica, is a small rounded organ, and consists of two parts—an anterior lobe (hypophysis), which is the larger, and more or less encloses the posterior (infundibular) lobe. This posterior lobe is connected with the outer aspect of the floor of the third ventricle by the stalk known as the infundibulum (Figs. 1 and 2).

Structurally the anterior lobe somewhat resembles the fetal thyroid, and consists of an irregular glandular organ composed of cubical or polygonal epithelial cells. These are separated by connective tissue richly supplied with blood vessels. The posterior lobe, which is divided from the anterior by the epithelial cells of the pars intermedia, is of a totally different composition, and consists of a ground-work of ependyma and neuroglia cells and fibres containing islets of epithelial cells (Fig. 3).

The development in man is interesting and worthy

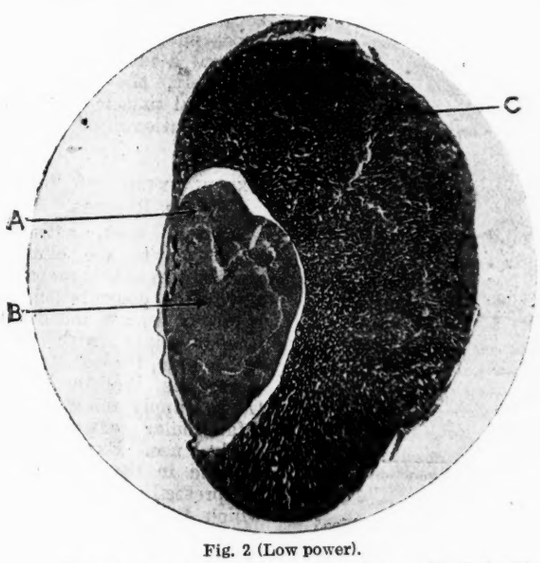


Fig. 2 (Low power).

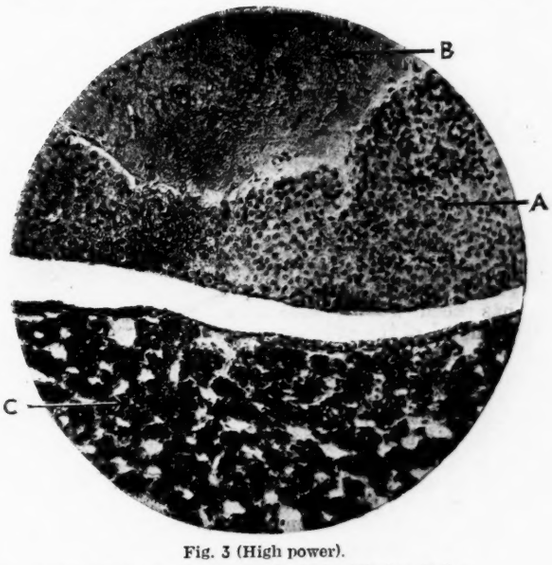


Fig. 3 (High power).

The pituitary body (cat). A, Pars intermedia (infundibular body—posterior lobe). B, Pars nervosa (infundibular body—posterior lobe). C, Hypophysis (anterior lobe).

*Read before the Liverpool Medical Institution, November 4th, 1909.

of passing notice. The anterior lobe, whose structure so much resembles that of the thyroid gland, arises from the stomodaeum. A hollow outgrowth (Rathke's pouch), lined with ectodermal cells, grows up from this space into the head (Fig. 4). This upgrowth, which forms a hollow vesicle, is gradually cut off from the stomodaeum, and becomes isolated in close apposition with the base of the fore-brain. The pars intermedia is derived from the same source.

In passing it may be mentioned that the thyroid gland is developed from an outgrowth from the primitive pharyngeal cavity, and its epithelial elements are, therefore, hypoblastic in origin.

The pars nervosa of the pituitary body is formed by a downgrowth from the floor of the third ventricle. This downgrowth expands at the extremity (posterior lobe) where it comes into relation with the anterior lobe, and remains connected with the brain by the hollow stalk which, as already stated, is known as the infundibulum. The infundibulum and posterior lobe should be called by the inclusive name "infundibular body." In some of the lower animals, such as the cat, a cavity may be seen in the posterior lobe directly connected with the third ventricle, and it must be understood that there are certain morphological peculiarities in different mammals.

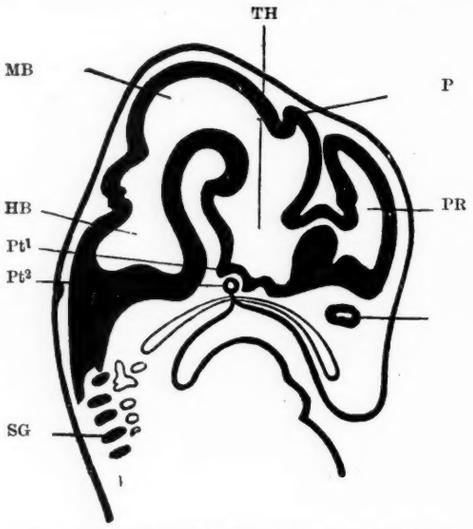


Fig. 4.—Vertical section through head of rat embryo. Showing the formation of the two parts of the pituitary body (diagrammatic). TH, Thalamencephalon. P, Pineal body. PR, Cerebral hemisphere. N, Part of nasal cavity. MB, Mid-brain. HB, Hind-brain. Pt¹, Cerebral part of pituitary body. Pt², Buccal part of pituitary body. SG, Spinal ganglion. (Young and Robinson, Cunningham's *Textbook of Anatomy*.)

P. T. Herring[5] has studied the histology, comparative anatomy, physiology, and development of the pituitary body.

Physiology.

Until quite recently very little was known definitely upon this subject.

The physiological functions of a structure such as the infundibular body are studied in two ways:

1. By injecting an extract of it into another animal.
2. By noting the effects produced by the removal of the whole, or a portion, of the structure under investigation.

In regard to the second point, it has been shown by Paulesco,[6] Harvey Cushing,[7] and others that total removal of the pituitary body from animals inevitably leads to death. Further, it has been shown that the removal of the anterior lobe, or of a portion of it, leads to genital infantilism—a condition almost invariably associated with destructive pituitary disease.

There is still much to be learnt, however; and as Dr. Hick and I are at present engaged upon work in connexion with the correlation of the ovaries and other ductless glands, I do not propose to anticipate, but pass on to the first point mentioned above—namely, the results of injection of the extract. In 1895 Oliver and Schäfer[4] found that an extract made from the pituitary body—that is, from both the anterior and posterior lobes together—caused a rise in blood pressure, but they considered that the action was not so powerful as that of the adrenal extract, the properties of which they had previously discovered. Subsequently Howell[8] found that it was the extract of the posterior (infundibular) portion which possessed this property, and that an extract from the anterior portion (hypophysis) alone did not raise the blood pressure. This was subsequently confirmed by Schäfer and Vincent.[9] Schäfer and Magnus[10] also discovered that the extract of the infundibular body increased the flow of urine by reason of a selective (vaso-dilator) action on the vessels of the kidney.

All that came out of these important experiments was that an extract of the pituitary body was put upon the market, in the form of a compressed powder, as a diuretic. As far as I can learn it was little used, if at all.

Three years ago it occurred to me, while working on the physiology of the female genital organs, to try, among other things, the influence of the extract of the infundibular body on uterine contractions. I wrote to Messrs. Burroughs, Wellcome, and Co. for a supply, and they very courteously put me in communication with Mr. H. H. Dale, who made for me a large quantity for intravenous injection. At the same time he informed me that he had already found that the infundibular extract caused uterine contractions. So that, although we independently presumed this property, he was the first to test it. His experiment illustrating the fact was, however, buried in a paper on ergot,[11] and no suggestion was made to use it clinically. The effect of the infundibular extract upon the uterus is, of course, a more or less natural corollary to Oliver and Schäfer's experiments on the blood pressure.

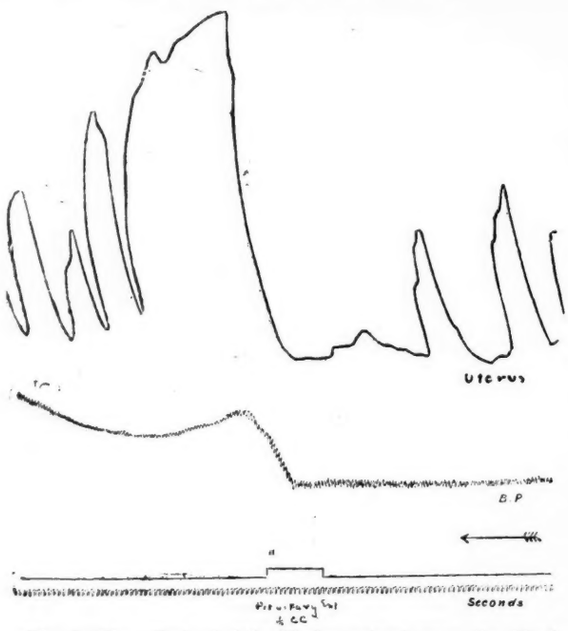


Fig. 5.—The effect of infundibular extract upon the blood pressure and pregnant uterus in the rabbit.

In the course of the numerous experiments carried out by Hick and myself, which have already been published,[2] we discovered a further property—namely, the action on intestinal muscle—which I shall mention directly.

Experimental and Clinical Results.

Having, then, satisfied myself as to the clinical possibilities of this preparation, after consultation in regard to dosage and other minor points with Mr. H. H. Dale, I asked Messrs. Burroughs, Wellcome, and Co. to supply me with the infundibular extract for clinical use. Except as a diuretic in the form of a compressed powder, to which I have alluded, no one appears to have used it previously.

I will mention in order some of the valuable properties of infundibular extract, and illustrate them from our experiments as well as by clinical records. There is no doubt, I think, that any one of these properties is sufficient to secure a permanent place in therapeutics for this much neglected portion of our anatomy.

1. *Infundibular Extract Raises the Blood Pressure.*

This property, as already pointed out, was first discovered by Oliver and Schäfer,[4] but they came to the conclusion that the infundibular extract was not so effective as adrenalin; this, however, is not the case. Infundibulin, if I may so call it, is remarkable in that it acts, as indeed other pressor substances sometimes do, in raising the blood pressure better when the animal or subject is in a condition of shock* than in normal circumstances. Most of our own experiments were carried out on pithed rabbits, in whom the blood pressure falls to a very low level. I look upon this as a most valuable collateral addition to its action: this raising of blood pressure in conditions of shock to a greater degree than is possible in more normal circumstances. (Fig. 5.)

Further, infundibulin keeps the blood pressure raised for several hours. This fact, too, can hardly be overestimated. We know how fleeting is the effect of adrenalin, and how useless, therefore, it is in cases of shock. In this new preparation, however, we have just the agent we need for the treatment of this condition.

In the case of a patient under the care of my colleague, Mr. Jeans, the blood pressure was raised and kept up for twelve hours. I am indebted to him and to his house-surgeon, Mr. Tinsley, for supplying me with a record of the case. I have myself used infundibular extract in cases of shock on several occasions. A good instance was the following case:

F. S. I removed a large fibromyomatous uterus which was densely adherent to the bowel and was fixed in the pelvis by adhesions due to coexisting suppurative appendicitis. After the operation, which was one of extreme difficulty, the patient was put back to bed with no pulse to be felt at the wrist; infundibular extract had been given before she left the table, and continuous subcutaneous salines were administered when she reached her bed. She made an excellent recovery.

I must emphatically point out here that this drug must in no way supersede, nor take the place of, saline infusions. It is used to raise the blood pressure for the time being, and in this way to save the patient during the critical period of vasomotor breakdown, a condition which salines cannot affect. I do not think the case just mentioned would have recovered on salines alone. On saline infusions, however, rests the responsibility of maintaining any improvement produced.

While our papers on the experimental results which we had obtained were in the hands of the editor of the BRITISH MEDICAL JOURNAL, Lockhart Mummery and Symes[12] published some experiments on the blood pressure in reference to shock, and concluded in regard to the extract of the infundibular body that our present knowledge of its properties and dosage was too incomplete to make it advisable to use it upon the human subject. I think, however, that the results that my colleagues and I have obtained at the Royal Infirmary will dispose of that view.

2. *Infundibular Extract causes Powerful Contractions in the Pregnant, Puerperal, and Menstruating Uterus.*

I have already said that it is somewhat natural to infer such an action in view of the effect infundibular extract has upon the blood vessels; at the same time, I would point out that most pressor substances have selective actions—adrenalin, for instance, acts more specifically upon the blood vessels than upon the uterus. Consequently, we were very glad to find that infundibular extract had a very special action on uterine muscle. Fig. 5 illustrates this effect upon the pregnant uterus of a rabbit.

When, therefore, I proceeded to use the extract clinically, my anticipations were speedily realized, for not only are the contractions in the human uterus made more powerful, but they are more prolonged than are those produced by any other preparation, not excluding the extremely active preparations of ergot now on the market.

Not a large number of serious cases have presented themselves. In normal labour I have used it with the desired results, but it is in the serious cases that one naturally looks for assistance. In two cases of Caesarean section I have had the opportunity of observing the naked-eye effect of a single injection; it is immediate and convincing. The uterus contracts into a blanched "ball," and only relaxes subsequently to a moderate degree. Subinvolution of the uterus, due to defective contraction and retraction, is one of the dangers subsequent to a Caesarean section, especially if performed before the onset of labour; in such circumstances secretions and blood clots may be retained and become infected—a state of affairs favoured by any contraction of the pelvis which may be present, for this condition leads to the sagging forward of a subinvoluted organ.

Then, too, there are those cases of sudden and serious haemorrhage which may occur before, during, or after labour. I supplied some infundibular extract to Dr. Hendry, the late obstetric assistant, with the request that he would give it an impartial trial. I cannot do better than append his report:

I used infundibular extract in two cases, and Dr. G. F. R. Smith used it in one other. In regard to the latter, which was a case of *post-partum* haemorrhage, Dr. Smith said to me on his return, "What do they need anything better than ergot for? the lot I injected acted like a charm." I knew, however, that there was no ergot in the bag, so I asked him to show me the box he got it from, whereupon he produced the infundibular extract.

In another case of *post-partum* haemorrhage, when I used it in conjunction with massage through abdominal walls, bleeding stopped in about three or four minutes.

The following are brief notes of the third case—one of placenta praevia—in which this preparation was used:

C. S., aged 29, 4-para. Her second and third deliveries were complicated by adherent placentae and membranes. In the present pregnancy bleeding began during the eighth month.

A severe haemorrhage—five pints of blood clot were recovered from the "chamber"—occurred on July 23rd, 1908. On my arrival the active bleeding had ceased, but the uterus was quite flaccid and no pains were occurring. The os uteri admitted three fingers, and the placenta was felt to be overlapping the uterine orifice, and extending 1 in. beyond the cervical margin.

The membranes were ruptured, version performed, a leg brought down, and infundibular extract injected. Two pints of saline solution were also infused intravenously. Pains came on about thirty minutes later without further haemorrhage. A second dose of the extract was then given, and the patient, whose condition had considerably improved, was removed to hospital. A dead child was born spontaneously three and three-quarter hours after the pains had recommenced—that is, four and a quarter hours after the first injection. Subsequent contractions and retraction were good, and the patient made an excellent, but slow, recovery.

There is little doubt that this preparation acts on the atonic uterus as well as, if not better than, it does upon the contracting organ, just as it does upon the blood vessels in conditions of shock.

I am inclined to think, therefore, that in the future we shall rely on infundibular extract to produce contractions of the uterus in many serious obstetric complications and difficulties, although I should, perhaps, add that in my opinion it ought but rarely to be given before delivery. I have for some time carried it in my obstetric bag, and would not willingly be without it.

3. *Infundibular Extract Acts upon the Intestinal Muscle.*

During our experiments on pithed rabbits we observed that violent peristaltic movements were generally set up in the intestines. On more than one occasion this led to

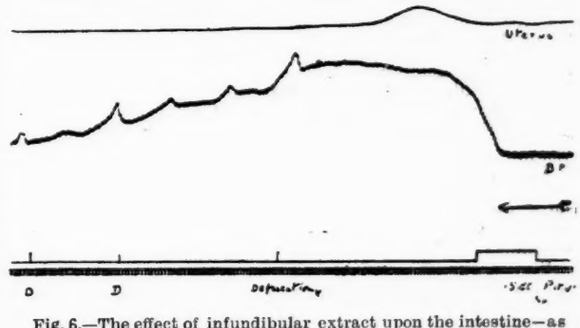


Fig. 6.—The effect of infundibular extract upon the intestine—as shown by rises in the blood pressure during defaecation and intestinal movements in the rabbit.

the expulsion of faeces. Fig. 6 gives a very good illustration of the effect upon the blood pressure of these intestinal movements; and it shows how violent they must have been to cause such rises in the general blood pressure

* "Shock" is, of course, essentially a condition due to lowered blood pressure.

With our eyes always open to the possibility of practical and clinical results, it at once occurred to us that specific results upon paralysed and distended intestine might be obtained.

It requires no pen picture of mine to remind surgeons whose duty it is to invade the peritoneal cavity of the terrible battles that are often waged against this dangerous and obstinate complication; nor obstetricians who have encountered the difficulties of pseudo-ileus after Caesarean section, or even after normal parturition. Most of us can recall vividly each case we have met with, for they are often indelibly impressed on our minds by the hopeless position in which we have been placed. I know there are some surgeons who will say that, if only these cases were treated early enough with calomel and turpentine enemata, there should be no difficulty. While that is, of course, sound and absolutely correct as advice, most of us know that the sequel is not always encouraging. Besides—in gynaecological work especially—an enema cannot always be safely given, owing to lacerations of or perforations in the rectum.

I would invite those, therefore, who cannot effect relief in any other way—if they be too sceptical to use it earlier—to give a trial to infundibular extract. I have now used this extract for intestinal paresis in a fair number of cases—fortunately with modern methods this complication is not so common as it used to be—and I have never known it to fail.

Again, let me point out that, as with the blood vessels and uterus, infundibular extract appears to act more definitely when there is considerable atony and paresis than in normal circumstances. Indeed, when the patient is not distended, and when peristalsis is normally present, an effect is not always observable; I do not say it is not present, but the result is not so obvious. This is no reason, however, why the extract should not be given early. It should be given as soon as the patient is becoming distended.

I do not propose to record my own cases, for independent evidence is of more value; but, as I have already said, I have personally never known it to fail. It is interesting also to note that in some of those cases in which I have given it to combat shock or collapse after a serious operation, flatus has been passed per rectum during the first twelve hours—a happy state of affairs which all will agree hardly ever occurs in ordinary circumstances. It happened in the case of shock I have already referred to.

I am much indebted to several of my surgical colleagues at the Royal Infirmary for having sufficient faith in my representations to test the extract in some serious cases of paralytic distension. As I think that the evidence of unbiassed observers will probably be more convincing than my own, I append a few illustrative cases as recorded for me by their house-surgeons.

Mr. A. M. Roberts has sent me the following account of a very serious private case under the care of Mr. Paul.

T. S., aged 33.

July 1st, 1909. The patient had a very severe attack of vomiting and pain. He was then fairly well for a month, but very constipated, and had to take pills and glycerine enules.

July 30th. The bowels were well moved.

July 31st. No motion.

August 1st. Very slight motion.

August 2nd. No motion, although he had taken pills and used an enule. Some pain towards evening and a severe attack of retching. One ounce of castor oil given. This and a second dose were at once returned.

August 3rd. Admitted to the Royal Infirmary. Immediate operation—ileo-sigmoidostomy—was performed, an obstruction having been found in the transverse colon. Calomel (gr. ½) was given every two hours with no result; also glycerine by the rectum was equally ineffectual.

August 4th. Same treatment, with no result.

August 5th. Morphine (gr. ¼) and calomel (gr. 6) were given, with no result. Subcutaneous saline infusions were also administered. The patient was vomiting continually, was distended, and in great pain.

Second Operation: Right lumbar colotomy; more calomel given, with no result.

August 6th. Absolute obstruction had now existed for five days. The patient was very bad. Vomiting was continuous, and he was in great pain from flatulence and distension. Calomel, aqua menth. pip. and cajeput oil and various other drugs were tried, with no relief. Towards midnight an injection of infundibular extract was given into the muscles of the forearm. Within four or five minutes a great quantity of flatus was passed by the colotomy wound, with instant relief. In an hour a second injection was given, and again within five minutes a liquid motion was passed by the colotomy wound.

August 7th. The bowels acted slightly, naturally, through the colotomy wound. Vomiting was much less. Towards evening the patient got distended again, and was in great pain. Another injection of infundibular extract was given, which produced, in less than five minutes, a profuse motion, and the passage of flatus both by the rectum and by the colotomy wound. There was instant relief.

August 8th. Much less vomiting. In the evening the flatulence returned, when a fourth injection of the infundibular extract was given, with a result similar to those already recorded.

August 9th and onwards. From this date the patient has improved steadily, and the bowels have given no further trouble.

Other Effects Noticed.—The pulse tension went up considerably for a few minutes after each injection, and the frequency was also raised 20 or 30 beats per minute. The patient became somewhat blanched and decidedly exhausted. The blanching lasted for two or three hours.

I have given this graphic report verbatim, but I would like to point out in regard to the last paragraph that no actual observations were taken, otherwise such conflicting statements as "the pulse tension went up considerably *for a few minutes*" while "the blanching lasted *for two or three hours*" would not have been made. Also the increased frequency of the pulse is mentioned but no note made of the subsequent slowing. Further, that a dying patient was "exhausted" appears to me to be a somewhat delicate inference!

I have only to add that the patient, a gentleman of great ability and occupying a high position in his profession, was convinced that he would have died without the infundibular extract—a belief that was, I think, shared by Mr. Paul. Not only was the relief following the passage of flatus great, but also the feeling of well-being and security that followed the first injection was, he said, past belief. Hearing that I had been concerned in what had been of so much assistance to him he sent for me to tell me this, and he added, "they say the 'stuff' made them nervous as I was so blanched, but all I can say is it made me feel jolly well, although I thought I was dying five minutes before"—a statement somewhat contradictory to the statement that the patient was "decidedly exhausted."

Mr. Tinsley has given me the following report of two cases under the care of Mr. Jeans:

CASE I.

August 23rd, 1909. K. W., aged 11. Admitted for acute appendicitis. Immediate operation; free fluid and pus evacuated. Fowler's position adopted, together with rectal salines, one pint every two hours. Subsequently continuous saline infusions into the thighs. Pulse rate 132; respirations 32.

Next morning the patient was slightly better. Pulse rate 116; respirations 24. Later in the day the patient became worse; the pulse rate rose to 160, and the respirations to 40. On the following day the patient was very ill and becoming much distended. Infundibular extract was administered at 5.15 p.m.; an evacuation of the bowels occurred in ten minutes.

Next morning the patient died suddenly. *Post-mortem* examination revealed pneumonia of the base of both lungs.

Effect of the infundibular extract on the blood pressure: The blood pressure rose steadily for twelve hours, and only subsided five hours before death. The temperature and pulse also continued to rise; not necessarily as the result of the extract, but more probably owing to the onset of pneumonia.

CASE II.

September 7th, 1909. J. D., aged 23. Admitted for appendicitis, with general peritonitis. Immediate operation. Free fluid in the peritoneal cavity. Fowler's position adopted, with rectal salines (1 pint every two hours). Temperature 99° F.; pulse-rate 160. General condition bad. Next day the patient was a little better. On September 9th there was some flatulence, but no great degree of distension.

Oil of cloves and physostigmine (1/75 gr.) were tried without effect. Infundibular extract was given at night; there was no immediate effect on the bowels, but the pulse rate dropped from 120 to 80 in six hours. Next morning the bowels acted well after an enema. The pulse rate was then 100, and the patient better.

On September 14th a residual abscess was found and opened, but patient died on the 16th.

In regard to this case, which I did not have the opportunity of seeing, it will have been noticed that there was no *immediate* effect on the bowels, as in the other cases. On discussing the matter with Mr. Tinsley, he agreed that there was no real intestinal paresis present; and indeed the bowels acted a few hours later. This bears out what I have already stated, that the worse the condition of atony, within limits of course, the greater and the more immediate the effect of the infundibular extract.

These are just three typical cases out of many in which similar results have been obtained. And as I know there

are other surgeons present to-night who, having heard of the value of the extract in our hands, have given it a trial, I shall be much interested in hearing further evidence in regard to it.*

I myself venture to think that in infundibular extract we have at last found a reliable agent for the treatment of paralytic distension of the bowel. If after an extended trial this prove to be the case, every surgeon's anxieties will be considerably lessened, to say nothing of the lives that will be saved. I have not as yet tried infundibular extract in post-operative acute gastric distension, but I should not be at all surprised to find that it would prove to be of real value in this very serious, if somewhat rare, condition.

4. *Collateral Effects.*

I now come to some collateral effects produced by the infundibular extract which are extremely important; and it is just these additional effects which put this preparation so far ahead of adrenalin, apart from its greater efficiency and more prolonged action on the involuntary muscle fibres, already discussed. I refer to its special action on the heart and kidneys. This extract, after a short initial increase in the frequency, slows the heart and causes more powerful contractions. This effect is still produced, though to a less degree, with the patient under the influence of atropine, which is the therapeutic equivalent to severance of the vagi. In similar circumstances adrenalin causes acceleration.

Again, while adrenalin causes a diminution in the secretion of the urine, infundibular extract has, as already mentioned, a marked diuretic effect which is of very great post-operative value.

Finally, I may say for the benefit of rhinologists, laryngologists, and oculists, that infundibular extract may prove to be even more effective than adrenalin in producing local anaemia. I do not wish to speak positively upon this point, having only conducted one or two experiments; but they seem to support this view.

I have no time to touch on the preserves of the general physician. I am sure, however, that before long there are many who will use it in asthma and many other conditions.

MODE OF ACTION, AND NATURE AND ORIGIN OF THE ACTIVE PRINCIPLE.

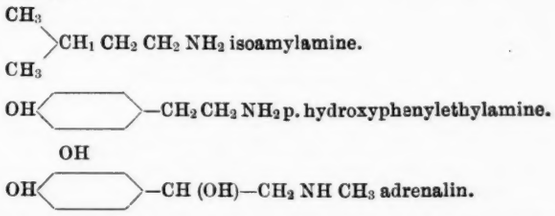
Without going too deeply into the subject, I may, perhaps, be allowed to say a few words as to the manner in which infundibular extract acts. There is little doubt that its chief effect is peripheral, for if we place a rabbit's isolated and active uterus in Ringer's solution the organ contracts violently on the addition of a small quantity of the extract.† I do not think that we have any evidence to show that infundibular extract acts on the "pressor centres"; but this is quite possible, and, if so, must be of special value in an exhausted or paretic condition of these controlling structures.

Probably it will not be long before the active principle is isolated, for much good work has been done on the subject of "pressor bases"‡ in the last few months. It may, therefore, not be without interest to recount, very briefly, the present position in regard to these compounds.

In 1906 Abelous[13] showed that a rise in the blood pressure was produced when the extracts made from putrid meat were injected into the blood stream. This year Barger and Walpole[14] published a paper in which they described the identification of the "pressor bases" concerned. These observers found that they were amines, namely, phenylethylamine, p. hydroxyphenylethylamine, and isoamylamine. There are one or two practical points arising from these chemical investigations. First, Rosenheim[15] was able to show that the active principle of the placental extract of Dixon and Taylor,[16] which was thought by them to be the cause of the normal uterine contractions in labour, was produced by incipient putrefaction in the placentae used, and contained the amines already mentioned.

Next, Barger and Dale,[17] a few months ago, showed that the pressor properties of ergot are also due to these same bodies. Further, it is well known that these amines bear a distinct relationship to adrenalin in regard to their structural formulae.

The following structural formulae are given by Dixon and Dale[18]:



It is important to bear these facts in mind, for there is in them a definite promise that in the near future the chemist will be able to synthesize the active principle of the infundibular body.

At present, however, we have to rely on an anatomical structure to provide us with it. So that it is interesting to know—or, perhaps, I should say conjecture—by what elements in the infundibular body the active principle is produced. In Fig. 3, representing a high-power view of the pituitary body, we see that in the infundibular portion, in addition to the nervous elements, there are islets of epithelial cells, as I have already described. It is probably these epithelial cells, and those of the pars intermedia, that are responsible for the pressor base; for it has already been shown by Osborne and Vincent[19] that extracts made from ordinary nervous tissue—whether of grey and white matter mixed, or each separately—rarely have any effect on the blood pressure; but that if there be any, it is a depressor one.

Lastly, one word as to the preparation that I have used and its administration. Messrs. Burroughs, Wellcome, and Co. have just put the extract of the infundibular body on the market in "vaperole" flasks. Each flask contains 1 c.cm., which is the ordinary dose for an adult. The activity of the preparation is not destroyed by boiling, so that before being sent out each flask and its contents are sterilized in that way. The injections should be given intramuscularly to avoid superficial sloughing from the local vaso-constriction. The dose may be repeated with one hour's interval. After a few doses a short refractory period is established; but as to how long this lasts we have at present no accurate knowledge.

I hope, in conclusion, that I have not emphasized the properties of the infundibular extract too strongly; I have endeavoured not to do so, for I feel that there is no need, since this preparation is quite capable of producing its own effects in a sufficiently dramatic manner.

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* In the discussion that followed about a dozen other cases were recorded—one being a case of intestinal atony in splenic anaemia.

† I am indebted to Miss Sowton for performing this experiment for me.

‡ "Pressor bases" are those organic compounds which cause a rise in the blood pressure when injected into the blood stream.

DR. GOYDER, of Bradford, has been nominated for election as president of the Society of Medical Phonographers for the ensuing year. Sir William Gowers, retiring president, and Professor Sims Woodhead are nominated as vice-presidents. The December number of the *Phonographic Record*, edited by Dr. F. H. Spooner, contains a note in shorthand by the president-elect founded on the paper entitled "An Experiment in the Treatment of Epilepsy," published in the BRITISH MEDICAL JOURNAL last January. The honorary secretary of the society is Dr. Gruner, Pathological Department, General Infirmary, Leeds, who will supply full information as to the society. The annual subscription to members of the profession is 7s. 6d., and to students of medicine 5s.

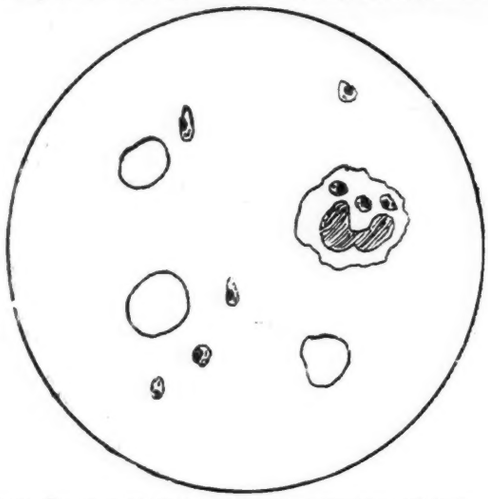
KALA-AZAR IN THE FAR EAST.

BY P. W. BASSETT-SMITH,
FLEET SURGEON, R.N., ROYAL NAVAL HOSPITAL, HASLAR.

DURING the past few years our knowledge of the relationship of the peculiar organisms known as the Leishman-Donovan bodies to the many undifferentiated fevers has largely increased.

The chief endemic centre of kala-azar was at first believed to be restricted to the north-eastern part of India, where these forms of fever were fully studied by Leishman, Rogers, Patton, and others. The geographical range has been considerably enlarged by further investigations, and it has been demonstrated by C. Nicholle that in children suffering from a prolonged febrile disease in North Africa analogous organisms are commonly found, produce similar intense blood changes, with enormous enlargement of the spleen and liver, and give rise to a high mortality.[1]

In May, 1908, I brought forward a case of a naval patient[2] who had apparently contracted the disease while on the China station. This man had visited Shanghai, Tientsin, and Hankow. Shortly after arriving in England he began to feel ill; he suffered later from vomiting, anorexia, anaemia, loss of flesh, and irregular fever. He was sent to Haslar Hospital as a case of malarial cachexia. On admittance he was in the third stage of kala-azar, the spleen filled up half the abdomen, the liver was large; the blood count was—red 3,800,000, white 2,000,



Leishman-Donovan bodies in film from liver puncture, Kiukiang, China.

with a relative increase in the large mononuclear cells. The organisms were demonstrated in the fluid drawn off from the liver. Under treatment by atoxyl he improved greatly, being free from fever and gaining weight and strength; later he was well enough to return to Australia, but there the symptoms returned and ended fatally.

I have lately received a blood film from Surgeon G. B. Scott, R.N., taken from a case at Kiukiang, in the Yangtse Valley; this film is swarming with Leishman-Donovan bodies. The patient was a boy at the Convent, coming from a village about twenty miles from Kiukiang; in this place cases with large spleens and livers are common, and many die from a similar disease to that found in this boy. His symptoms were irregular fever, great anaemia, and very marked enlargement of the spleen and liver. Acting with Dr. Lambert, the resident medical officer, the liver was punctured, and from the fluid drawn off the films were made.

It is evident, therefore, that in the upper part of the Yangtse Valley we have another endemic centre of the peculiar disease known as kala-azar, that it is particularly common in young adults, and that it causes a high mortality. I have brought these facts forward as all information relating to the epidemiology of this disease is of importance in studying the condition as a whole, particularly when the evidence is supported by actual demonstration of the causative organism.

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Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

EFFLORESCENCE OF UREA IN URAEMIA.

NOTING Dr. Rolleston's statement that efflorescence of urea is a very rare phenomenon,[1] I may remark that a few years ago I attended a young man in the terminal stage of what was apparently a case of small white kidney without previous symptoms.

The patient died of uraemia, profuse diaphoresis occurring partly as result of spasms and partly as result of the therapeutic means used. After death the relatives called my attention to a profuse powdery scurf all over the body. I explained this to them as probably due to urea left by the perspiration after evaporation. Under the microscope the powder showed minute crystals scattered in the deposit, probably those of NaCl. After solution in alcohol, filtering, and evaporation on a glass slide, crystals of urea formed a copious deposit, and gave several of the ordinary micro-chemical reactions. I remarked at the time to the patient's relatives that although free elimination of urea by the sweat had been secured this did not obviate the fatal result, which seems in accordance with previous experience.

Edinburgh. JAMES CAMERON, M.D.

PLACENTA PRAEVIA IN GENERAL PRACTICE.

I WAS interested in the annotation on placenta praevia in general practice, published in the JOURNAL of September 18th, 1909, page 810, for it so happens that I have had as many as three cases during the present month, a fact which constitutes a record in one way, for I can only recollect having had 6 cases altogether during the twelve years I have been in practice.

Some points in connexion with these cases and the treatment adopted may be of interest, hence my reason for trespassing on your space to record them.

The first of these cases is interesting from the standpoint of what Nature will do. I was called to see the patient at 8.30 p.m. on September 8th, the history being that she had severe haemorrhage which came on suddenly in the early morning and then ceased, recurring once or twice during the day. When I was sent for, in the evening, I found the placenta presenting, the haemorrhage at that time not being severe, and the os being about the size of a shilling, and no pains. I gave the nurse instructions to watch the patient, and to let me know at once when pains came on, or if there was any haemorrhage. About 12 p.m. the child was born without any difficulty; the patient only having had two or three pains, a message having been dispatched; but when my colleague, who went down instead of me, arrived, all was over, and mother and child doing well. It may be argued that this was not a severe case, and some may doubt that it was a case of placenta praevia; but I venture to say that if this case had been near a lying-in hospital where it could be admitted, means would have been resorted to for delivery, with possibly not such good results to mother and child.

The second case was one where there had been considerable haemorrhage, and on examination I found the placenta presenting, the os being about the size of rather more than a five-shilling piece, and the woman rather collapsed, as the haemorrhage was free. I immediately sent for my colleague, who gave an anaesthetic, and I was able to deliver with forceps. No further haemorrhage, but the patient was very collapsed; but with the usual treatment for shock and collapse, including saline injections per rectum, the patient gradually rallied, and is now progressing favourably, but has a little phlegmasia dolens, the loss of blood possibly having something to do with its causation.

The third case was one I saw on Friday, September 24th, at 8.30 p.m. Bleeding came on suddenly at 2 a.m., when the nurse was sent for. It then ceased, and came on again in the evening, when I was sent for, and on examination I found the os about the size of half a crown and very rigid, and haemorrhage fairly free. I watched the case closely, gradually dilating the cervix, and eventually delivered with forceps under an anaesthetic.

[1] BRITISH MEDICAL JOURNAL, August 28th, p. 537.

Another case, about two years ago, I was able to deliver in the same way.

The remaining two cases were complicated by transverse presentation, and the treatment adopted was internal version. All the mothers did well.

I am, therefore, inclined to favour the view of dilating and delivering with forceps as soon as possible; but, if haemorrhage were very severe and dilatation likely to be delayed, I would not hesitate to adopt the combined method of version as treatment. But to adopt any form of treatment such as mentioned in your annotation, as advocated by Krönig and Sellheim, appears to me quite unnecessary, and would only add a still further complication to an already dangerous condition.—I am, etc.,

ARTHUR T. JONES, M.R.C.S., L.R.C.P.Lond.

Mountain Ash.

Reports

ON

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

LADY DUFFERIN HOSPITAL, PATIALA, INDIA.

CASE OF LITHOPAEDION REMOVED BY OPERATION.

(Reported by M. S. BALFOUR, M.B., C.M.)

A HINDU woman, aged 32, was admitted on May 17th complaining of an abdominal tumour.

History.

She had had one child, born five years before. Three years ago she noticed enlargement of the abdomen, and considered herself again pregnant. She had suppression of menses, milk in the breast, and thought she felt fetal movements. After nine months these symptoms disappeared, the menses recommenced, and the abdomen, she stated, became smaller until it reached its present size.

Condition on Admission.

A tumour filled the lower half of the abdomen, reaching on the left side to the level of 1½ in. above the umbilicus, and on the right side level with the umbilicus. The tumour was freely movable, intensely hard, and on vaginal examination was felt to be unconnected with the uterus, which was of normal size. The right mass of the tumour was felt very readily in the right lateral fornix, and was noted as resembling a fetal head.

Operation.

The abdomen was opened in the middle line, between umbilicus and pubis. The tumour was readily lifted out of the abdomen, and was found to consist of a nearly calcified fetus, attached by a number of long adhesions chiefly to the omentum and anterior abdominal wall. Some of these contained fairly large vessels, which were clamped and cut. There were no remains of any placenta.

The patient made an excellent recovery.

The fetus was lying in the abdomen, with the head in the right vaginal fornix. The thighs were flexed on the abdomen and the legs on the thighs. The total length was 7in., of which 4 in. consisted of the head. The head was flattened from side to side, and the remains of the features could only be traced with difficulty. The arms were partially united to the chest and the feet to the legs. The whole fetus was stiff and hard, as if carved from a block of wood. The vessels in the adhesions were probably becoming obliterated, and might have been chipped off the fetus without tying.

AMONG the appointments to the Commission of the Peace for the County of Elgin recently made by the Lord Chancellor we note the names of Thomas Hood Wilson Alexander, M.D., of Elgin, Thomas Brander, M.D., of Lossiemouth, and John Taylor, M.D., of Elgin.

Reports of Societies.

MEDICAL SOCIETY OF LONDON.

Monday, November 22nd, 1909.

Dr. SAMUEL WEST, President, in the Chair.

Trigeminal Neuralgia.

MR. JONATHAN HUTCHINSON, in a paper on the operative treatment of epileptiform trigeminal neuralgia, speaking of the mortality of the operation, held that it was unfair to quote the early statistics, which gave a high percentage. The mortality had come down, in practical hands, to about 5 per cent. Of his 30 cases, all had recovered. If his modification of the operation was practised—namely, leaving the ophthalmic trunk intact—all danger to the eye was avoided. Out of the 30 cases, this modification was carried out successfully in 26. In the other 4, in which the eye and forehead had been left anaesthetic, some ocular complication had happened in all, but in only one had it proved serious. Mr. Hutchinson's first case dated twelve years ago, and even longer periods of cure had been observed. It was a matter of importance to avoid operation in patients obviously neurotic. Neurotic symptoms were as a rule absent in true epileptiform cases. The average age of the patients in his 30 cases was 52 years.

Dr. WILFRED HARRIS restricted his remarks on treatment for the most part to neuralgia of the fifth cranial nerve characterized by the definiteness of the pain area, corresponding roughly to the anatomical distribution of one or more branches of the nerve. The pain came on in severe spasms, varying in duration from half a minute to half an hour, and there might be intermissions of months, or of years, in which the patient was free from pain, otherwise the pain continued until operation of some kind, or death, brought relief. The sexes appeared to be about equally affected. Thus, of 265 cases, 144 were men, and 121 women. There seemed to be a definite predilection for the disease to attack the right side, which appeared to suffer more than twice as often as the left side. The character of the pain was sometimes exactly simulated by other forms of trifacial neuralgia, particularly dental neuralgia. True trigeminal neuralgia affecting the first or ophthalmic division of the nerve alone, was much less common than of the second or third divisions. The diagnosis of the site of the cause of the pain was important in estimating the probable results of any projected treatment. If the pain were referred along one or more branches of the nerve, and there was no trace of any anaesthesia or analgesia, then the site of the cause of the pain was peripheral, and search must be made for any source of peripheral irritation. During the last twelve months he had seen 29 cases of true trigeminal neuralgia, or tic douloureux, 24 of which he had treated by injections of 80 per cent. alcohol. Of the 24 cases which he had treated by alcohol injection, 20 appeared to be so far completely successful as regards entire disappearance of the pain. Two of the remaining 4 cases were partial failures.

Sir VICTOR HORSLEY said that for the 149 cases in patients of varying ages on whom he had operated for the removal of the Gasserian ganglion the death-rate was 7 per cent., but that only applied to patients over 50, for he had never lost a patient under the age of 50. One death was from accidental sepsis at University College Hospital; the others were due to the arterio-sclerosis from which these patients suffered. He considered that the so-called mortality and the so-called disadvantages of the operation were undoubtedly greatly exaggerated. He advocated the method of injecting alcohol with the view of avoiding the Gasserian operation, and he found that the best results from alcohol injections were obtained in cases where the affection was strictly localized to one division of the nerve. The general procedure was to recommend injection of alcohol first, and afterwards, if necessary, resort to the removal of the Gasserian ganglion.

Mr. C. A. BALLANCE referred to the effect produced by the intracranial division of the second and third divisions of the fifth nerve. If respite from pain for three years was secured by this procedure, he considered that it was a good operation, and in these circumstances better than

the removal of the Gasserian ganglion. He advised trying injection of alcohol before removing the ganglion.

Dr. L. G. GUTHRIE remarked that some of the patients with severe trigeminal neuralgia looked well, and did not seem to be affected by the disease except at the actual time of the spasm. He suggested that there might be a neurotic cause for the trouble.

Dr. T. G. STEWART said that probably some of the cases reported as still suffering from trigeminal neuralgia after removal of the Gasserian ganglion were examples of psychical cases.

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.

Friday, November 5th, 1909.

Mr. A. E. MAYLARD in the Chair.

THE following were among the exhibits: Mr. H. RUTHERFORD: Three specimens illustrative of *Gangrenous hernia*. (*a*) Richter's right femoral hernia in a single woman, aged 30. The symptoms were of three days' standing; there was little local pain, no diffuse swelling, and her general condition was remarkably good. After opening and clearing the sac, the abdomen was opened in the middle line, and 5 in. of bowel resected. When seen four months later the patient was in excellent health, and the scars firm. The specimen showed a diverticulum the size of a small filbert, with ragged perforation at its apex, and a thinned anaemic groove at its base. (*b*) Right inguinal hernia in a man aged 44; symptoms of about three days' standing, complicated by deep jaundice, enlarged liver, and very irregular and dilated heart. A small loop of bowel was resected through the herniotomy wound. The case did well for nearly a fortnight, when the temperature rose, and pain came on in the region of the gall bladder, jaundice again becoming more pronounced. On second operation the gall bladder on examination was found distended with pus, and drained, with relief of pain and diminution of jaundice. (*c*) Right obturator hernia in a woman aged 59. Symptoms of six days' standing, during which time the bowels had moved twice in response to enemata. The abdomen was opened in the middle line, and a distended loop found fixed down at the obturator opening. It was perforated at one part and the sac contained putrid material. The patient died in about eighteen hours. Dr. GEORGE A. ALLAN read notes on two cases of *Dextrocardia*. The first was in a patient suffering from mitral disease. The apex beat was situated in the sixth interspace 7 in. to the right of mid-sternum. Liver, stomach, and spleen, were likewise transposed. After death the whole of the thoracic and abdominal organs were found transposed. The second case was that of a patient with left haemo-pneumothorax, in whom the cardiac dullness and pulsation were found to be displaced to the right of the sternum. The patient recovered, and in six weeks the heart had regained its normal situation. The cause of the haemo-pneumothorax was not obvious. There had been no injury, and no evidence of phthisis or other pulmonary disease could be discovered. The condition came on suddenly when the patient was apparently in good health. Dr. W. K. HUNTER, blood films from a case of acute *Haemorrhagic leukaemia* in a woman, aged 22, who dated her illness from a bleeding from the gums four weeks previously. A fortnight later blood appeared in the urine and had persisted. There was no history of intestinal or subcutaneous bleeding. The points of special interest were (1) the haematuria, a rare symptom in leukaemia; (2) the preponderance of mononuclear cells in the blood count; they were neither typical large lymphocytes nor neutrophile marrow cells, a feature which made it doubtful whether the case should be classed as a lymphatic or a myelogenous leukaemia. A similar case had been reported by Fiessinger and Pierre-Louis Marie, in *La Tribune Médicale*, January 16th, 1909.

UNITED SERVICES MEDICAL SOCIETY.

Wednesday, November 10th, 1909.

Sir ALFRED KROGH in the Chair.

Clinical Meeting.

THE following were among the exhibitors:—Captain C. C. CUMMING: A case of *Heat-stroke* invalided from India. After being unconscious thirty-six hours, the patient was found unable to speak distinctly or intelligibly or to walk or use his arms. At present there was no impairment of the general functions or of sensation. He spoke slowly but slurred his words. There was slight inco-ordination in the limbs and inability to maintain his balance without some slight support. No loss of memory or brain power. Major HARRISON pointed out the resemblance of the case to disseminated sclerosis, with the difference that it showed steady improvement. The patient was unconscious of any impediment to his speech, even when speaking quite unintelligibly. Captain CUMMING: A case of *Splenic anaemia* in a patient, invalided, on account of enteric fever, in 1902. The enlargement dated from that period. Towards the end of that year he had an attack of haematemesis and syncope, the spleen being much enlarged. Similar attacks occurred in 1903, and again, after a long period of freedom, in 1907, and at the beginning of last year. At present the spleen was enlarged to within 1 in. of the umbilicus and tender in the axillary line. The red cells were reduced to 3 million and the haemoglobin to 50 per cent. Major SPENCER: A case of *Fracture of the cervical vertebrae*, unrecognized at the time of occurrence, and only revealed by a subsequent *x*-ray photograph ten days after the accident. There was then some rigidity in the cervical region, but no tenderness or deformity. There was still some rigidity of the neck and an area of impaired sensation on the posterior surface of the lower third of the forearm. Captain J. C. KENNEDY described a case of *Phagedaenic ulcer of the larynx*. The laryngeal symptoms were not well marked till within a few days of death. The previous history was one of high fever and enlargement of the liver and spleen. No parasites were present in the smears made from a liver puncture. A large bacillus was found invading the laryngeal tissues, but could not be identified or subcultured.

CHELSEA CLINICAL SOCIETY.

Tuesday, November 9th, 1909.

Mr. LEONARD A. BIDWELL, President, in the Chair.

Presidential Address.

MR. BIDWELL, in a presidential address dealing with the development of *Gastric surgery*, said that the first case on record occurred in 1602 at Brandenburg, when a knife was removed from the stomach of a sailor by Mathieu, probably after the formation of an abscess. In 1784 a penetrating wound of the stomach recovered without surgical treatment. The patient was at first given fluid food by the mouth, but rectal feeding was afterwards substituted. In 1808 a record of certain cases of ruptured gastric ulcer showed that they were all fatal, and that no operation was even thought of. The first definite operation on the stomach was performed by Sédillot in 1847, but no successful cases were recorded before 1875. Billroth experimented on animals in 1876, but the first operation for pylorectomy on the human subject was by Péan in 1879. Czerny successfully removed the pylorus in 1881. The decade 1880–90 was one of great progress: gastro-enterostomy by Wölfler, resection of ulcer by Rydygier, dilatation after gastrotomy by Loreta, gastrectomy by O'Connor, gastro-enterotomy by Van Haecker, and pyloroplasty by Heincke and Mikulicz. In the next decade occurred the first successful case of operation for perforated ulcer. This was performed by Kreig in 1892. Doyen published accounts of several successful cases shortly after this, but even in 1899 the operation was, in this country, considered quite unjustifiable, notwithstanding the successful operations of Schlilker, Brigham, and Libke. It was not till the present decade that gastric surgery had become actually recognized and popular, but operations, whether for malignant disease or for simple ulcer, were now of everyday occurrence. Removal of the greater part of the stomach, too, in certain cases of malignant disease, was found to be quite a desirable operation, affording a hope of radical cure in about 30 per cent. of the cases. In cases where gastric ulcer had returned after operation, gastro-enterostomy was found to have very satisfactory results. In cases of rupture, operation was the more successful the earlier it was performed. The results of the removal of the entire stomach in certain cases had shown that this organ was not so necessary to digestion and life as was formerly supposed. Indeed, the rapid entry of food

into the intestines appeared to have been, in many cases, rather favourable to digestion than otherwise. It was possible, of course, that reaction might set in, that the importance of the stomach in relation to the act of digestion might be more highly esteemed, and surgeons become more averse than they were to gastric operations; but, in any case, the experience of the last twenty years had at least proved that the stomach was an organ well within the reach of modern surgery, and that the old-fashioned plan of depending on the appearance of the tongue as the sole guide to the condition of the stomach was partial, one-sided, and out of date.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Tuesday, November 23rd, 1909.

Dr. J. MITCHELL BRUCE, President, in the Chair.

Rôle of Fats in Gastric Disorders.

DR. F. CRAVEN MOORE and Dr. R. L. FERGUSON read a paper on the rôle of fats in the treatment of functional disorders of the stomach. Following on the demonstration by Pawlow and his co-workers that fats depressed the secretory activity of the stomach in the dog, a number of Continental observers established a similar effect on the secretory activity of the human stomach, and employed liquid neutral fats with beneficial results in the treatment of such morbid conditions of the stomach as were associated with excessive secretory activity. The systematic investigation of the secretory activity of the stomach in all cases of gastric disease having shown the frequency with which excessive secretion obtained, certain fats were employed therapeutically, and with such apparent benefit that it appeared desirable to investigate the effect of the administration of fat on the secretory activity of the stomach more extensively than had yet been done. Employing the Ewald test breakfast and estimating the free HCl, the total acidity, and the peptic activity of the stomach contents removed one hour after the ingestion of the meal, they had found in some 60 cases that the previous administration of 1 oz. of olive or almond oil invariably led to a marked reduction in the acid values and in the digestive power of the stomach contents. This effect, though constant, presented some interesting variations in different morbid conditions, and was greatest in cases of gastric and duodenal ulcer associated with hypersecretion. Clinically, it was found that the administration of such fats had a decidedly beneficial influence on the subjective discomfort of the patients and on their general nutrition, and particularly so in cases of pyloric and duodenal ulcer associated with hypersecretion and a tendency to pyloric spasm with acid regurgitation. In explanation of this effect of the administration of liquid neutral fats on the acid values and digestive power of the stomach contents, their observations, so far as they had proceeded, showed that the view that it depended on a regurgitation of duodenal contents was not of general application. Dr. A. F. HERTZ had for two years been treating cases of ulcer of the stomach and duodenum by an exclusively oil diet for a day or two, with the result of complete removal of the pain. Even during haemorrhage it was of much more value than rectal feeding, which was known to be accompanied by the secretion of gastric juices. There had been in his patients almost no intolerance of the diet. Subsequently he had been giving a dose of oil before the ordinary meal, and as a general result the recurrence of symptoms of ulceration had appeared to have been prevented. Dr. R. SAUNDBY had found that pain ordinarily disappeared in cases of gastric ulcer as soon as the patients were put to bed, but he had found the oil treatment very useful for the relief of hyperacidity. He preferred to give an emulsion of oil, and no difficulty in taking it was experienced by his patients. Dr. R. HUTCHISON was especially interested in the point of how oil prevented gastric secretion; he thought it must be a chemical process. He was a little sceptical as to the necessity of the oil method of treatment of hyperchlorhydria; other less unpleasant methods were efficacious. He also thought that rest in bed was sufficient to relieve gastric ulcer patients from pain. What the effect of an oil diet on pancreatic secretion was had to be considered. After remarks by Dr. R. L. FERGUSON, Dr. CRAVEN MOORE replied.

SECTION OF DISEASES OF CHILDREN.

Friday, November 26th, 1909.

Dr. PORTER PARKINSON in the Chair.

THE following were among the exhibits: Dr. A. E. GARROD: A case of *Multiple peripheral neuritis* in a child aged 8. The child was quite healthy until March, 1909, when, after an attack of abdominal pain, she passed involuntarily a stool containing several ounces of blood. A similar attack occurred in May, and several others later. When admitted to hospital on September 16th, she was a well-nourished child; good mental condition; marked loss of power in both upper limbs from deltoid downwards, and double wrist drop; muscles of lower limbs weak, no tremor, sensation unimpaired, other systems normal. Electrical reaction showed muscles of all extremities with reaction of degeneration (except flexors and special muscles of thumb and little finger). Blood examination: Red corpuscles, 4,984,000; haemoglobin, 94 per cent.; white cells, 10,500. No cause for the condition was discoverable. Dr. G. A. SUTHERLAND thought a positive diagnosis was not possible. Dr. E. I. SPRIGGS referred to two similar cases recently shown. Dr. ROBERT HUTCHISON: (1) A girl aged 9 with *Cirrhosis of the liver*. There had been swelling of the abdomen for one year; no previous illness of importance. Two stillbirths preceded this child. There were snuffles as a baby. The liver was enlarged and irregular and the spleen considerably enlarged. There was some ascites and a cirrhotic facies. A positive vasomotor reaction had been obtained. He ascribed the condition to syphilis. (2) A boy aged 13 weeks with *Unidactyly*. The small digit only was present on both hands and both feet. The child was otherwise normal. The child's father, two uncles, and an aunt were similarly affected, as also the grandfather and great uncle and a paternal cousin. Mr. O. L. ADDISON: A case of *Congenital enlargement of one limb* in a brother and sister aged 9 and 5 respectively. The boy's arm, shoulder, and hand were enlarged, and there was 1 in. increase in length. In the girl the left leg was 1¾ in. longer than the right. The calf, relatively larger than the thigh, was hotter than the rest of the limb. Dr. R. C. JEWSBURY: An infantile heart showing a *Nodular endocardium* from a child aged 4 months, who died from bronchopneumonia. No cardiac lesion was detected during life. *Post mortem*, a large number of wart-like nodules were found, especially on the mitral and aortic valves, a few also on the other valves, and on the septum of the foramen ovale. Microscopic examination showed no signs of recent or previous inflammation. Dr. SPRIGGS regarded the nodules as hypertrophy of those usually seen in infants' hearts. Dr. J. D. ROLLESTON (for Dr. CARPENTER): A specimen of compression of the trachea by the enlarged thymus. It was removed from a child, aged 10 months, who died after an illness of less than twenty-four hours. This began suddenly, with quick breathing and sickness. The temperature reached 103°, and the respiration-rate 80. During life there was recession of the intercostal spaces, and embarrassed breathing. The specimen showed a large thymus pressing on the trachea which was much narrowed from before backwards. The lungs showed evidence of death from asphyxia. The liver and spleen showed some fatty change, but the other organs were normal. The case was shown as positive evidence that an enlarged thymus may cause death. Mr. LOCKHART MUMMERY read a paper on a case of strangulation of the small intestine by a band in a child aged 15 months. Obstruction developed suddenly. A tumour, thought to be an intussusception, was distinctly felt in the right side of the abdomen. The child had been operated upon for intussusception when 5 months old. Operation on the present occasion was performed within nine hours of the onset of symptoms, and the band divided. Recovery was uninterrupted

Reviews.

DISEASE IN CHILDHOOD.

THE third edition of the well-known work, *A Practical Treatise on Disease in Children*,[1] by Dr. EUSTACE SMITH, is assured of a ready welcome. The author holds a foremost place in the rank of authorities, and his writings have played an invaluable part in creating an interest in his special subject. In the third edition large portions of the book have been rewritten and rearranged, and much matter previously unnoticed has been introduced. Amongst other subjects introduced for the first time are those of congenital laryngeal stridor, traumatic birth paralysis of the arms, tics and habit spasms, congenital pyloric stenosis, post-nasal vegetations, and adrenal haemorrhage. The work, in fact, has been brought thoroughly up to date, and the text includes numerous references to the most recent writings of British and foreign authorities. Notwithstanding all the alterations and editions, the latest edition retains the best features of its predecessors. In it there is the same graphic picture of each complaint, told in short and happily-worded sentences. The author, indeed, is a master of style, and his book is easy and pleasant to read. If medical knowledge could be acquired from verbal description alone, no better work for that purpose could be desired on this special subject. The clinical cases introduced, too, are admirably adapted to illustrate and assist the text. To those acquainted with his former writings it will be unnecessary to state that treatment receives full and adequate attention. In this portion of his subject there is a wealth of detail that is scarcely to be found in other works, and in dealing with children it is this attention to details that makes for both success in treatment and the comfort of the patient. The busy practitioner, too, will find many suggestions here that may prove of service to him in times of difficulty. Any lengthy criticism of the third edition of such a work is unnecessary and uncalled for. The author's predilection for a varied diet in infancy, his partiality for more than one of the proprietary foods, his distrust of many kinds of fresh fruit for older children, are points upon which there may fairly be a difference of opinion. The author can, however, appeal to the results of a long experience in support of his methods, even when they are not in agreement with the findings of chemical analyses or the dictates of a present day physiology. To his advice to leave off mercurial treatment in cases of hereditary syphilis directly or soon after the symptoms disappear, from a fear of the drug causing a profound anaemia, more serious exception must, however, be taken. Such advice is contrary to that of all other authorities, and it is a common experience in such cases that a prolonged mercurial course, so far from causing anaemia, has a directly contrary effect. There are, of course, other statements to which we might hesitate readily to subscribe, but it is saying much for the merits of a book of this size that we can only note a solitary instance calling for strong adverse comment. All through his work the author shows a generous appreciation and acknowledgement of the work of others. The third edition deserves, and will no doubt command, success as great as its predecessors.

Dr. BERNARD MYERS's book on *The Care of Children*[2] has a preface by Dr. G. F. STILL. With much of the latter's commendation of the work we are inclined to agree. The best part is the section dealing with the preparations for the forthcoming baby, and its treatment when newly born. Mothers and nurses will find in this section many suggestions that will prove of service. Infant feeding is dealt with in a comparatively short space, but the information contained is all that it is necessary for those for whom the book is designed. We cannot think, however, that the use of barley water is so harmful or so obsolete nowadays as the author imagines. There are many authorities of large experience who still consider it has considerable advantages over plain water as a diluent of cow's milk. It is true, as the author states, that it contains starch, but the amount of this substance is small, and probably not more than the limited powers of the saliva and pancreatic secretion of quite young infants can deal with. The instructions as to the diet and general care of children in later infancy, and from 2 to 12 years of age, are sensibly and plainly written. In a chapter on the Mental Education of Children Dr. Myers deals briefly with an important subject seldom mentioned in ordinary textbooks, and his advice can be commended. We would have thought, however, that the merits of the kindergarten system were so generally recognized as to render the author's description and warm approval of it unnecessary. In another chapter on the Ideal Nurseries we fail to find anything very novel beyond the suggestion that the day nursery should be at least 30 ft. long, by 20 ft. wide, and 15 ft. high, and the night slightly larger still, but rooms of such dimensions are seldom, as the author admits, available for the purposes suggested. A chapter on Illnesses and Accidents might be considerably improved by enlarging the section dealing with accidents, and omitting the greater part of that concerned with diseases. We quite fail to see what benefit the few elementary remarks the author has to make on such subjects as pleurisy, diphtheria, typhoid fever, deaf-mutism, idiocy, infantile paralysis, granular lids, hip disease, etc., could possibly be either to mothers or nurses. Writing on diphtheria, too, he states, "It begins with pains in the back and limbs, the temperature going up to 102° or so; convulsions may occur." We would consider such a statement dangerous if it should lead mothers and nurses to believe that the complaint did not often, or usually, begin with symptoms totally different to those mentioned. The little work needs careful revision, but in its present form it contains much information that should prove useful to those for whom it is intended.

The seventh volume of the Practical Medicine Series[3] for 1909, under the general editorial charge of Dr. Gustavus Head, is occupied with the subjects of *Pediatrics and Orthopedic Surgery;* the former being edited by Dr. ISAAC ABT with the collaboration of Dr. MAY MICHAEL, and the latter by Dr. JOHN RIDLON. In this country, in a similar work, the section on orthopaedics would doubtless have been included in the volume on surgery, but in America, possibly, the same distinction is not drawn between medicine and surgery that obtains here. The work is essentially a series of abstracts of papers on the specified subjects that have appeared in American, British, and foreign medical journals during the past year. On the whole the articles chosen for abstracting would seem to have been judiciously selected and the process of condensation carefully done. In one abstract dealing with Gabritchevsky's method of injecting dead streptococci as a prophylactic in scarlet fever the results are claimed as excelling all expectations, and if the figures given are substantiated by further trial the method would seem deserving of the closest attention at the hands of the profession. The work contains much information in a concise form, and should prove useful; and still more so in the last respect if it should lead the reader of the abstracts to consult the original articles themselves.

THE COMPARATIVE FREQUENCY OF DISEASES.

THE object which Dr. GRANT ANDREW had in view when preparing his book on the *Age, Sex, and Comparative Frequency in Disease*[4] was to afford practical information in a statistical form on the matters mentioned in the title of the volume. A collection of 42,063 cases, comprising almost every form of recognized disease, is arranged alphabetically, and statistical tables are set out showing the age incidence and, when necessary, the sex prevalence in each. The relative frequency of the more important

[1] *A Practical Treatise on Disease in Children.* By E. Smith, M.D. Third edition. Edinburgh and London: W. Green and Sons. 1909. (Roy. 8vo, pp. 857. 21s.)

[2] *The Care of Children, from Babyhood to Adolescence, for the Use of Mothers and Nurses.* By Bernard Myers, M.D., C.M., with a preface by George F. Still, M.D., F.R.C.P. London: Henry Kimpton. 1909. (Cr. 8vo, pp. 176. 1s. 6d.; cloth, 2s. 6d.)

[3] The Practical Medicine Series, 1909. Edited by Dr. G. P. Head. Vol. vii, *Pediatrics.* Edited by Dr. Isaac Abt and Dr. May Michael. *Orthopedic Surgery.* Edited by Dr. John Ridlon, with the collaboration of Dr. A. Steindler. Chicago: The Year Book Publishers. Glasgow: G. Gillies and Co. 1909. (Cr. 8vo, pp. 242. 5s.)

[4] *Age, Sex, and Comparative Frequency in Disease.* By Jas Grant Andrew, Bachelor of Medicine and Master of Surgery; Fellow of the Faculty of Physicians and Surgeons; Surgeon to the Victoria Infirmary, Glasgow. London: Baillière, Tindall and Cox. 1909. (Demy 8vo, pp. 459. 10s. 6d.)

affections of most organs and their order of frequency are studied from the point of view of the aid they may give in diagnosis. The data thus arranged will, it is expected, be found useful from both a clinical and an actuarial point of view. It is a creditable and, indeed, in many respects, an important book. It will be found a useful and ready source of statistical information. The introductory chapter gives a concise and lucid review of the author's conclusions. The tables showing the relative number of cases of the different affections treated in the successive decades of life can be readily understood, and in many instances serve the practical purposes of elucidating general consideration as to different diseases of the same organ, and points of value in differential diagnosis. The author has carried out his self-imposed task in a most able manner, and it is important that there should be found men willing to undertake an investigation so laborious, for it is to be feared that inquiries of this kind cannot be expected to appeal very strongly to the average medical reader. It will be, however, a work of reference of no little use to writers, especially writers of textbooks.

It is very difficult to say what value should be attached, at the actual moment of making a diagnosis, to the relative frequency, under given circumstances, of age and environment as known to the physician or surgeon who has to advise a patient. No doubt knowledge of the kind does influence every one, consciously or unconsciously, and some more than others. Dr. Grant Andrew's book will serve a useful purpose if it encourages, as it ought, a more general application of the method of exclusion in diagnosis; it will, for instance, remind us of the relative frequency of the more common disorder of an organ which should be proved not to exist before a diagnosis of a rare disease is reached. In using the book, however, for this purpose, its limitations must be borne in mind. Being founded on the cases occurring within a limited range, it cannot have a universal application, and in some sections the number of cases to be dealt with is very small. But among the many sections which are based on abundant material and show proof of careful analysis, especial attention may be directed to those on the heart and arterial system, the brain, and the kidney. The bone affections also are treated at length, but the sections on cancer and sarcoma are rather disappointing. In neither of these subjects has the question of age incidence been fully worked out, and but scant reference is made to the diversified forms of malignant growth.

OPHTHALMOLOGY.

THE second edition of the second volume of CZERMAK'S well-known textbook of ophthalmic operations will be welcomed as a work of reference by all ophthalmic surgeons.[5] It has been brought up to date by ELSCHNIG, who, on the whole, has done his work well. Fuller details might have been given of extraction in the capsule, as practised by Smith, and of the methods of producing or attempting to produce the so-called filtration scar in the treatment of chronic glaucoma. Lagrange's procedure is dismissed in four lines, and Major Herbert fares even worse, only two lines being allotted to him. On the other hand, cyclodialysis—an operation which few surgeons would care to perform, and which histological examination has proved to be worthless—is discussed at length and is recommended as the best means of treating chronic glaucoma. On the whole, British ophthalmology receives the attention it deserves, and most recent work is referred to and discussed. We cannot, however, understand Elschnig's criticism of T. Henderson's theory of glaucoma. He says it does not account for the fact that a badly performed iridectomy is often successful, whereas the theory is the only one which does successfully explain why any incision into the iris can lower tension. The iris never heals; its tissues are opened up, and form new channels for drainage. The operations upon the globe are discussed in the second volume, the first 60 pages being devoted to a general consideration of incisions, their best position, how they heal, and their complications. Corneal operations come next in order, those involving the implantation of a flap of conjunctiva being especially well described. This method, which is very useful in covering loss of corneal substance, is somewhat neglected in England, although constantly practised by Kuhnt and others in Germany with the best results. Much of the book is given up to iridectomy and to the various methods of dealing with cataract. Czermak evidently thinks that extraction after a preliminary iridectomy is the safest method, but he advocates the usual combined operation, with the section in the corneo-scleral margin, as the best for most cases. When everything is very favourable the simple operation may be chosen. Czermak says this requires a large section, embracing half the cornea, but Elschnig thinks that the section need not be larger than that used in the combined method. Czermak's own operation for subconjunctival extraction of the cataractous lens is fully described. It is recommended by many German surgeons for cases in which septic infection is to be feared, or for patients whose mental condition is unsound. Elschnig, however, states that septic infection of the wound is just as frequent after subconjunctival as after ordinary extraction. The disadvantages of the method are obvious, the advantages problematical. Iridectomy for acute glaucoma should, he thinks, when possible, be done with the keratome, but if the anterior chamber be very shallow a Graefe knife may be necessary. In this advice the author agrees with most Continental and with many English provincial surgeons. In London, however, the Graefe knife seems to be usually chosen. The volume closes with an account of how to extract foreign bodies from the eye, and with a description of operations performed for detached retina. The illustrations have no artistic merit whatever; they are mere diagrams, but serve their purpose. On the whole the book, though of great value to the expert, is not as useful to a beginner as is Haab's much smaller work. The volume is comprehensive and thorough, but it is undoubtedly dull reading. It is written in easy, straightforward German.

The little volume on the ocular hygiene of infancy, by Dr. E. GINESTOUS,[6] deals with those eye diseases of childhood which are very common, and can be prevented or ameliorated by timely attention. It contains nothing new or striking, but the principles of modern prophylaxis and treatment are clearly enunciated and explained. In his introduction the author maintains that the State should care for the eyes of children, and adopt measures to prevent blindness; a blind child not only cannot earn its living, if brought up untrained, but it may become a charge upon the community, entailing a double loss of wealth. He points out that among the causes of infantile blindness acute purulent forms of conjunctivitis and corneal lesions are by far the most frequent, and the most easily prevented. While admitting that Credé procedure almost eliminates gonococcal blenorrhoea, he adds that in a certain proportion of cases it gives rise to a great deal of irritation, but fails to discuss the advantages of a moderately strong solution (20 per cent.) of protargol. The various types of infective conjunctivitis common to infants are shortly described, and a few pages are devoted to refraction and squint. The author regards squint as an inherent vice of the nervous system; he finds that in 37 per cent. of the cases the father is an alcoholic, and in 70 per cent. the mother is subject to hysteria or other neurosis. He rather believes in maternal impressions as a cause of congenital deformities, but does not attach much importance to consanguinity. No child, our author holds, should learn to read till he is 7. It is impossible to expect a serious treatise to be compressed into 111 pages of large print; the book is merely a sketch of what a large book might be, and is neither concise nor very practical. It is a little difficult to determine for what class of reader it is intended. A very serious blemish arises from the author's complete ignorance of all English literature. Had he read Nettleship's recent work upon retinitis pigmentosa, he must have included him among the authorities he quotes, and we might give many other instances of failure to notice an important English work.

[5] *Die Augenärzlichen Operationen.* Von Professor Czermak. Zweite Auflage. Herausgegeben von Dr. Anton Elschnig. II Band. Berlin and Wien: Urban and Schwarzenberg. 1908. (Sup. roy. 8vo, pp. 728. M. 25.)

[6] *Hygiène oculaire de la première enfance.* Par Dr. Etienne Ginestous. Paris: Vigot Frères. 1909. (Cr. 8vo, pp. 111. Fr. 2.)

The *Dictionary of Ophthalmic Terms* is a small book, written by Dr. E. MAGINNIS, of Kingstown, Ireland,[7] who states in the preface that "many of the terms will not be found in the ordinary medical dictionary." This we can quite believe, and we should be very surprised to find any ophthalmic surgeon using many of the terms or even knowing what they meant. Certainly the student need not imagine that more than about one-tenth of those given are in ordinary use. Many of the definitions are curious. Who, for instance, would dream of defining "*Aspergillus glaucus*" as "fungus from saccharine fruits which cause suppuration of the cornea"? We wonder how many ophthalmic surgeons use such terms as *Atretopsia*, *Bitot*, *Spots*, *Blepharo-chromidrosis*, *Caligo*, *Canities Corecleisis*, *Corectomy*, *Dacryagogue*, or *Dysopia*. Few people if asked would define the word *Halo* as "a luminous circle seen by the patient about light in glaucoma." This reminds us of the boy who, when asked what stars were, answered that "they are the things you see when you get a punch in the eye"! There is a short supplement which gives brief directions for testing vision, and also a list of formulae. The book contains all the terms in common use and dozens which are never used at all. We are not greatly struck with its utility.

The tenth number of Professor WIDMARK'S[8] reports from the ophthalmic clinic of the Caroline Medico-Surgical Institute at Stockholm contains a record by von Knape of histological research upon cases of choked disc. Seventeen eyes, taken from patients with cerebral tumour, chronic nephritis, leukaemia, haemophilia, and orbital tumour, were hardened in Müller's fluid, stained by van Gieson's and other methods, cut in serial sections and examined. There are two main theories. One regards optic neuritis as an inflammatory process, the other holds that it is a mechanical result of pressure; hence we have the terms "papillitis" and "choked disc," each suggesting a different pathogenesis for the same condition. The author found definite signs of inflammation in his first eight cases—five of cerebral tumour, one of chronic nephritis, one of acute myelogenous leukaemia, and one of pernicious anaemia. In a case of vascular tumour of the orbit these signs were altogether wanting. He concludes, therefore, that optic neuritis may be an inflammatory process or a pressure phenomenon, and that hydrops of the vaginal sheath of the optic nerve is not a purely mechanical event, but that there is a vital element. He suggests that the primary cause is always a narrowing of the central vein of the retina caused by the oedematous sheath of the nerve pressing upon it. A. Troell describes two cases in which severe sympathetic ophthalmitis followed—in one case a hypopyon ulcer, in the other a perforating ulcer of the other eye. The histological examination of the excised eyes showed in each case those changes which Fuchs and others have found to be characteristic of the inflammation which excites a sympathetic cyclitis, and which are quite distinct from ordinary inflammation. He can only find records of ten similar cases. In both his own examples and in many others an operation had been performed. This, he thinks, is the etiological factor in causing the sympathetic inflammation. He recommends sodium salicylate as the most useful drug to use in sympathetic ophthalmitis. J. Widmark contributes a paper on the diminution of myopia among the Swedish school children. In 1870–80 at least 50 per cent. of the classical scholars were myopic, the proportion being considerably less in modern schools (*Gymnasia* and *Realschule*). This percentage has gradually diminished till now the figure is only about 20 per cent. The statistics apply to the upper forms. He ascribes the improvement to the increasing number of boys taking a modern education rather than a classical, and to the great attention now given to games. The Swedish schools are in this feature copying the English. Jacobäus's paper on Mikulicz's disease, which is characterized by symmetrical swellings of the lacrymal and salivary glands, gives much useful information on this rare condition, and discusses the diagnosis beween it and chloroma and allied leukaemic conditions. Simon found that the Roentgen-ray treatment of these cases was successful; in at least one patient the swellings disappeared and did not return. Lindhahl, in a further paper on the agglutinating action of tears, confirms his previous work. The tears contain agglutinins, which appear to act in the same way as serum-agglutinins.

[7] *Dictionary of Ophthalmic Terms with Supplement.* By Edward Maginnis, M.D., D.P.H., Ophthalmic Surgeon, St. Michael's Hospital, Kingstown, etc. Bristol: John Wright and Sons, Ltd.; and London: Simpkin, Marshall, Hamilton, Kent and Co. 1909. (Imp. 32mo, pp. 67. 2s. 6d.)

[8] *Mitteilungen aus der Augenklinik des Carolinischen Medico-Chirurgischen Institutes zu Stockholm.* Herausgegeben von Dr. J. Widmark. Zehntes Heft, 1909. Jena: Verlag von Gustav Fischer. Price (about) M.5.

ENVIRONMENT AND HEREDITY.

IN a lecture, bearing the somewhat cacophonous title of *The Relative Strength of Nurture and Nature*,[9] Miss E. M. ELDERTON summarizes the evidence accumulated by workers in the Galton Eugenics Laboratory with reference to the shares of hereditary and environmental factors in the genesis of mental and physical conditions. Miss Elderton finds no significant association between parental intemperance and the health of their children, the coefficients of correlation being negligibly small. The author remarks: "Here, again, we see that drink has practically no influence on general health and intelligence of boys and girls, and the little influence it has is in favour of the children of drinking parents—they are healthier and more intelligent." In no case examined does the factor of environment compare in numerical magnitude (as measured by the coefficient of correlation) with that of heredity. But Miss Elderton utters a warning against drawing hasty conclusions. At the beginning of the lecture, after discussing the process by which it is believed correct results may be obtained, she writes: "We admit to the full that even then we may not have avoided all danger of pitfalls, that we may have overlooked possible factors, and that spurious correlation may have arisen from all sorts of disregarded selective processes. The prudent statistician will always advance his conclusions with a word of caution; he will simply state that they are those which reasonably follow from the data provided." These remarks are eminently judicious, and we could wish that all writers on eugenics might bear them constantly in mind. While all sanitarians will welcome further applications of the statistical method to public health problems, they will deprecate attempts to ground far-reaching conclusions upon material of extreme complexity—a complexity which can hardly be realized by laymen, however acute or laborious they may be. As Miss Elderton recognizes, further work in this field is urgently needed, and will doubtless be forthcoming.

[9] *The Relative Strength of Nurture and Nature.* By Ethel M. Elderton. Eugenics Laboratory Lecture Series. III. London: Dulau and Co. 1909. (Demy 8vo, pp. 40. 1s.)

NOTES ON BOOKS.

The History Sheet, or Case Paper System[10] is the title of a small book of 167 pages, published by Messrs. P. S. King and Son. It contains articles by Mr. Henry F. Aveling, Clerk to the Paddington Guardians; Miss Mary E. E. James, a guardian of Bethnal Green; Miss W. L. Brodie Hall, guardian of the Eastbourne Union; Mr. R. Clift Horner, guardian of the Eccleshall Baerlow Union, and the late Dr. Milson Rhodes, alderman of the County Palatine of Lancaster. Its object is to show the advantage in Poor Law administration of what is known as the "Case Paper System," which is already in use in various unions throughout the country. This system endeavours to tabulate on a separate sheet the history of every applicant for Poor Law relief. The sheets are docketed, and preserved, so that they may be readily consulted in any subsequent appeal for relief by the same applicant. The various writers point out clearly the great value of such a record in properly organizing Poor Law relief work, and how useful a check it may be in preventing imposition on the public. The Majority Commissioners have specially recommended the system, but the Minority do not notice it, for such a system could only work under a Destitution Authority. If the whole of the class needing Poor Law assistance were to be broken up, and distributed among various bodies, according to their requirements, such a record would lose its value.

WHITE AND HUMPHREY'S *Pharmacopedia*,[11] a second edition of which has recently appeared, is a commentary

[10] *The History Sheet, or Case Paper System.* London: P. S. King and Son. 1909. (Cr. 8vo, pp. 179. 2s.)

[11] *Pharmacopedia.* By Edmund White, B.Sc.Lond., F.I.C., and John Humphrey. Second edition. London: Simpkin, Marshall and Co. 1909. (Roy. 8vo, pp. 709, 46 plates. 12s. 6d.)

on the *British Pharmacopoeia* intended for the use of students and of practising pharmacists. It is, of course, essential that pharmaceutical, and to a less extent medical, students should be thoroughly familiar with the contents of the *Pharmacopoeia*, but that work is not, and should not be, written as a students' textbook or cumbered with the explanations necessary for its full comprehension; consequently students who attempt to learn the *Pharmacopoeia* without sufficient explanation by a teacher of the reasons for particular requirements, and of the chemistry and pharmacognosy involved, are very likely to content themselves with merely memorizing the more important matters contained in it. The present work is exactly what is required in order that such memorizing may be replaced by the intelligent study of the official book. The authors have been very successful in realizing the student's point of view and amplifying and discussing the official monographs in such a way that all the facts become rationally connected to the student's general body of knowledge. Much of the information is of a nature to be useful to others besides students; as examples, may be mentioned the monograph on pepsin, in which the differences of the commercial varieties from one another and from the pure enzyme are made clear, or the explanations of the chemical nature of synthetic remedies, such as antipyrin and sulphonal. Another section of the book consists of an atlas of materia medica, containing drawings of typical specimens of most drugs, with brief descriptions. In the present edition some of the monographs have been rewritten and the whole subjected to a general revision, but the differences from the former edition are not very great.

In the preface to his volume on *Self Help for Nervous Women*,[12] Dr. JOHN K. MITCHELL, of Philadelphia, states that "the book is not intended for doctors." It consists of a revised and elaborated reprint of a series of articles which the author contributed to *Harper's Bazar* in 1901. The homely style in which it is written is suited only for those whose interest in nervous affections is of domestic importance, and it is frankly addressed "chiefly to women because they form the larger number of sufferers from functional nervous disease." The advice which the author offers to his readers is, in its way, useful, and amounts to a homily on the virtues of self-control and a plea for the cultivation of a wider and less self-centred life on the part of those who have either acquired or inherited nervous systems which are unstable and feeble. The woman—and there are many such—who makes her own life miserable and exhausts the patience of all her friends and relatives is well portrayed in the following description:

> This is the woman who, with or without special demands for sympathy or consideration, "takes it out" of every one near, seeming to absorb strength and vitality from those about her to their detriment, yet not to her gain. She is always a chronic invalid, she may be young or old, agreeable or disagreeable, attractive or the reverse, her qualities seem to have no share in the effect. An ordinary quarter hour's visit to her leaves you exhausted, squeezed dry. She uses up nurses like a machine grinding material. One sees charming people of this sort—intellectual, cultivated, with lively sympathies of their own—who are perfectly unable to appreciate their peculiar influence upon others, and, in spite of agreeable conversation, quick comprehension, and active intelligence, one looks forward with dread to the necessary visit.

Every physician is familiar with this type of woman, and will derive a certain satisfaction from Dr. Mitchell's forcible appellation—"Vampire Patient." There is nothing new in the book, but it contains advice that, if old and even threadbare, is worth listening to. The class of women to whom it is addressed will lighten the burden of their own lives and promote the happiness or those to whom they belong if they will take to heart and endeavour to put into practice the friendly counsels which the author, in familiar and apt language, offers for their guidance.

TWO GARDEN BOOKS.

The *Monthly Gleanings in a Scottish Garden*[13] are very much what they would be in an ordinary English or Welsh garden—always interesting and welcome. The *Gleanings* under consideration contain also some poetry, botany, and bird-lore—with a little theology. For the most part the photographs scattered through the volume are good; each month has its photographic illustration. In their proper months roses and strawberries are discussed, nor are the butterflies forgotten. So, with one thing and another, this little book of large print is spun out to nearly 200 pleasant pages.

[12] The Simple Life Series. *Self Help for Nervous Women. Familiar Talks on Economy in Nervous Expenditure* By John K. Mitchell, M.D., Fellow of the College of Physicians of Philadelphia, etc. London: William Heinemann. 1909. (Cr. 8vo, pp. 202. 2s. 6d.)

[13] *Monthly Gleanings in a Scottish Garden*. By L. H. Soutar. London: Fisher Unwin. 1909. (Cr. 8vo, pp. 192. 6s.)

Like the authoress of the preceding volume, Mr. LLOYD, in *The Months of the Year*,[14] takes us month by month through the garden, but he does not keep us in the garden. He does not, however, take us out of it before he has introduced us to the robin redbreast. No self-respecting writer on gardens would ever do that. But when he gets us outside it is with him almost a case of "go as you please." So he talks about umbrellas, cock-fighting, university boat-races, lawn tennis, falconry, hunting, golf, Lord Mayor's day, and a crowd of other things, as the time of year, or the bent of his mind, suggests. The photographs with which he illustrates his text are excellent, and amongst them one may be specially mentioned with approval, that of a London fog, taken one mid-day from the steps of St. Paul's Cathedral. There is plenty to interest a reader—never mind who he is or what are his tastes—in Mr. Lloyd's book of 300 pages. And if a reader takes it up on a Sunday, when, from persistent wet—or any other reason—he is disinclined to go to church, he may find in it little bits of sermon quite pleasantly delivered, and by no means out of harmony with their surroundings.

[14] *The Months of the Year*. By the Rev. Pemberton Lloyd. London: W. H. and L. Collingridge. 1909. (Demy 8vo, pp. 307; 42 illustrations. 5s.)

SANITARY APPLIANCES.

Covered Milk Reservoir.

THE milk vessel and cream distributor shown by Dr. T. Barrett Heggs, medical officer of health of Sittingbourne, at a recent meeting of the Canterbury and Faversham Division, is in the form of a bucket provided with a tap and a tight lid. Attached to the lid is a stirrer for mixing. The handle by which the stirrer is actuated projects through the lid, and it is stated that a few turns are sufficient to distribute the cream evenly throughout the milk; some investigations made by Dr. Heggs appear to show that this claim is justified, for even after standing over three hours the amount of fat in milk drawn from the tap was 93 per cent. of the original standard. The vessel is ventilated and easily cleaned, and is made with an ice-water cooling jacket if required. It seems to be particularly well adapted for shop use, as any quantity of milk can be withdrawn without uncovering the vessel. The appliance is the invention of the sanitary inspector of the Milton Regis Urban District.

MEDICAL AND SURGICAL APPLIANCES.

Double-action Alar Tourniquet.

THE following is a description of a double-action alar tourniquet designed by Major N. P. O'Gorman-Lalor, I.M.S.: This tourniquet, as its name implies, is a double-action one, and appears to present several distinct advantages over similar instruments in previous use. (1) The motion of screwing down the pad on the wounded vessel at the same time raises two metal wings at either side of the instrument. The action results in diminished pressure upon the limb, and the return venous circulation is encouraged, in place of being obstructed, as it is by instruments of the usual type. (2) The double movement which every turn of the screw causes considerably increases the mechanical advantage of the latter. The vessel is thus rapidly compressed by a few turns of the screw. (3) The bearing points of the instrument are so far apart that the skin cannot be nipped up between them, however rapidly it is applied. In use the pad should be applied directly over and parallel to the course of the vessel, and the tape should be well tightened around the limb before the instrument is screwed down. The instrument is made by John Weiss and Son, Limited, Oxford Street, W.

Dr. W. J. HENSON (Wedmore) writes to state that the illustration of the Amater feeding bottle described in the JOURNAL of November 20th, p. 1475, was printed upside down.

The London Hospital: Main Front Buildings.

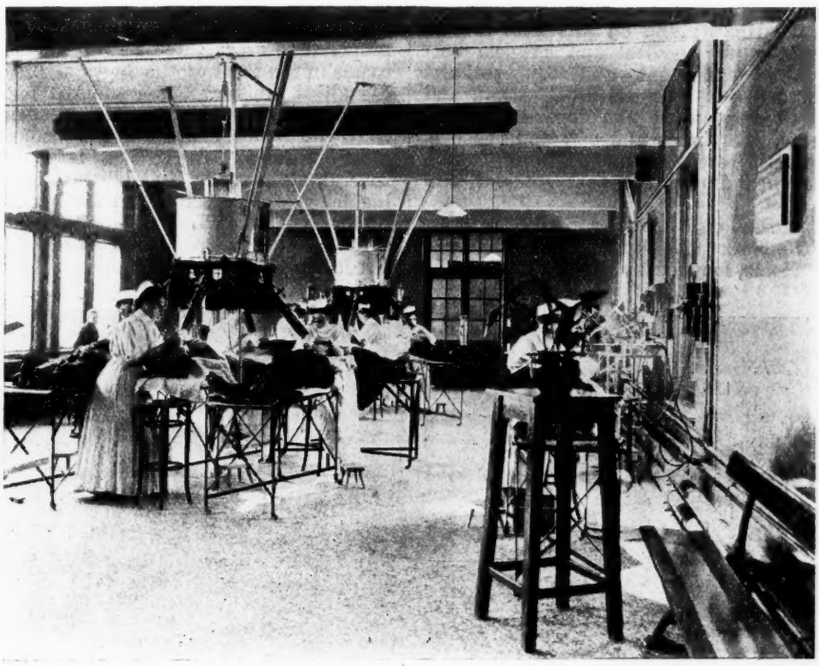
SEVENTY-EIGHTH ANNUAL MEETING
OF THE
British Medical Association
LONDON, JULY, 1910.

EACH of the hospitals of which we write in this article has, during the past fourteen years or so, been treated structurally in somewhat the same manner; important new buildings have been added, while the old buildings have been greatly altered and improved in order to meet modern requirements. The medical school attached to each of them affords a complete training to the student in both the preliminary and the purely professional subjects.

THE LONDON HOSPITAL AND MEDICAL SCHOOL.

This hospital, containing 922 beds, is situated immediately opposite the Whitechapel station of the Metropolitan and District Railways. Since 1897 it has been very much altered and improved. Many of the buildings are absolutely new, and those which are not new have been altered to such a degree that they may be regarded as new. Passing beneath the porch, the old chapel over which has been removed to make way for a clinical theatre with adjacent rooms for patients and staff, we enter the large front block of buildings. The most important alterations in this block are to be found in the addition of two floors, the lower of which, the present third floor, contains what the House Committee, in their annual report for 1905, were justified in believing to be "the most completely equipped operating suite in the world." The suite comprises five operating theatres, three anaesthetic rooms, instrument and sterilizing rooms, and several other apartments for the surgeons and dressers. The air before entering the theatres is filtered by an apparatus in the basement of the block. Both of the wings which run backwards from the main block have been enlarged by the addition of another floor. In the west wing this story consists of the four splendid Hebrew wards, while in the east wing it forms the new kitchen, in which 1,200 dinners can with ease be cooked daily. In the wings extending east and west of the main building extensive alterations have been made to provide ample accommodation for the treatment of gynaecological and obstetric cases, including two separate operating theatres, one in each wing. There are also a number of rooms for those who are engaged in teaching and learning midwifery and the diseases of women. Running backwards from the east wing is the Pathological Institute, opened by Sir Henry Roscoe in 1901. Here we find an admirable *post-mortem* room, with lecture rooms, laboratory, a mortuary chapel, and a freezing chamber cooled by the waste brine from the ice-making plant which is adjoining. Leaving the institute, and proceeding still away from the main block, we pass two buildings, mostly new, for the nursing staff, and cross Oxford Street to the Eva Lückes Nurses' Home, named after the Matron of the Hospital and opened in 1905, which contains every arrangement that can conduce to the comfort of 260 nurses. Adjoining it is a building of which the second and third floors are devoted to the teaching of nurses, while the basement and two lower floors contain the hospital laundry. To the west of this building, separated from it by a garden, is a new self-contained isolation block for septic and infectious cases, which is cut off from the other hospital buildings by Oxford Street. Leaving this block we proceed down the street and cross Turner Street to the new out-patient department. This fine building was opened by the King and Queen in 1903. In the basement are stores and a pharmaceutical laboratory. Recently a Tyrnauer's apparatus of hot-air baths for the treatment of rheumatism, chronic arthritis, and kindred disorders, has been installed here. On the ground floor is a spacious waiting hall capable of seating 1,200 patients. At each end of the hall are suites of rooms in which patients are examined and treated by the physicians and surgeons, while on one side is the dispensary and on the other the vestibule. On the first floor are departments for throat and ear cases, diseases of women and diseases of the teeth, while on the second floor are the ophthalmic, electric, and phototherapeutic departments. The installation of this department is most comprehensive, and, we believe, the finest in London. With two large Finsen lamps, four Finsen-Reyn

lamps, and one Quartz Mercury Vapour lamp, a dozen patients can be treated at one time. The machinery for generating the electricity for this department is on the roof. The out-patient department is connected with the main hospital buildings by a subway. The cost of all these extensive additions and improvements has been nearly £500,000.

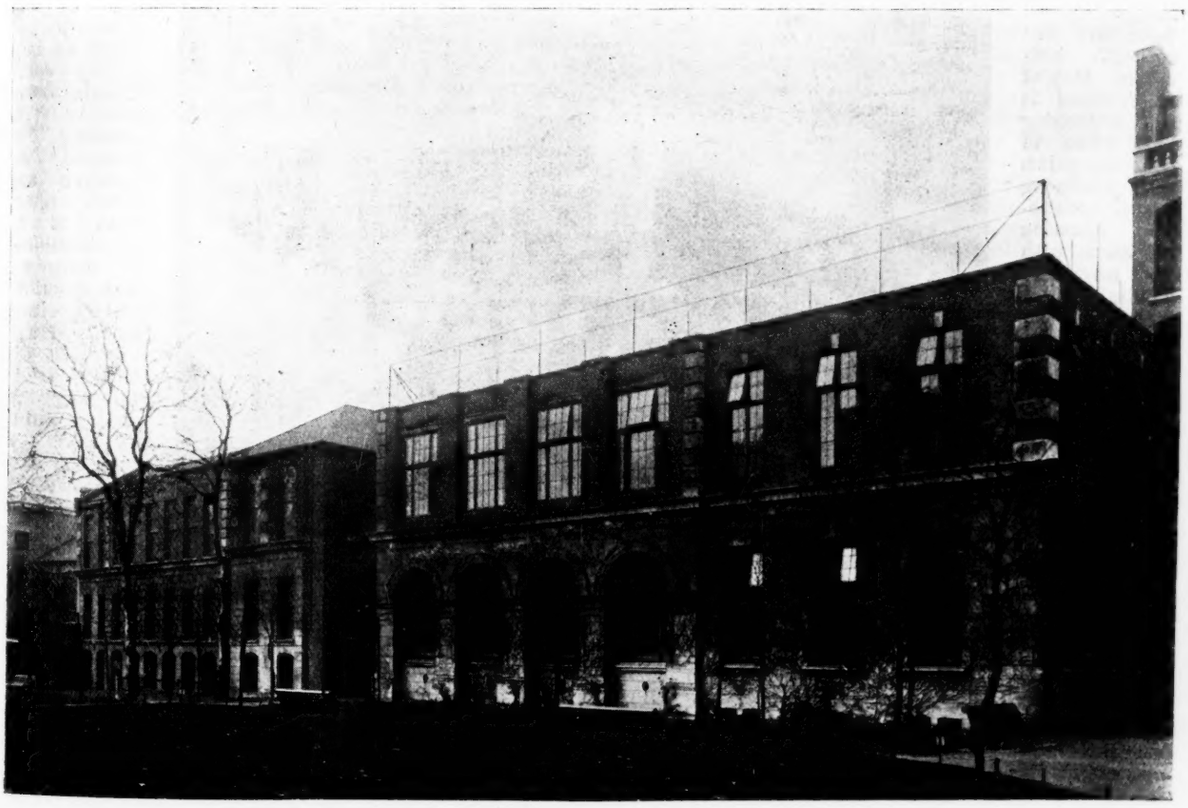


Finsen Light Department, London Hospital.

The *Medical College* is situated opposite the out-patient block in Turner Street. There have not been quite such extensive changes in it as in the hospital. But it has been much enlarged by the addition of chemical, physiological, bacteriological, and other laboratories; and at the present time a new chemical theatre is in course of erection, and the portion of the college which is occupied by the Students' Club is being extended. We have already mentioned the new Pathological Institute, on the other side of the hospital. An endowment fund for the London Hospital Medical College has recently been established.

GUY'S HOSPITAL AND MEDICAL SCHOOL.

Guy's Hospital, in St. Thomas's Street, in the Borough, is close to the London Bridge Stations of the South-Eastern and Chatham and the City and South London railways. It contains accommodation for 620 patients. To the visitor who enters by the front gates in St. Thomas's Street no very marked external changes are to be pointed out until he has traversed the colonnade (having paused, perchance, to notice the memorial to the Guy's men who gave their lives for their country in the South African war) and has descended the short flight of steps to the roadway in front of the medical buildings (Hunt's House). Then, before him and on the right, will be seen several large and recently erected blocks.

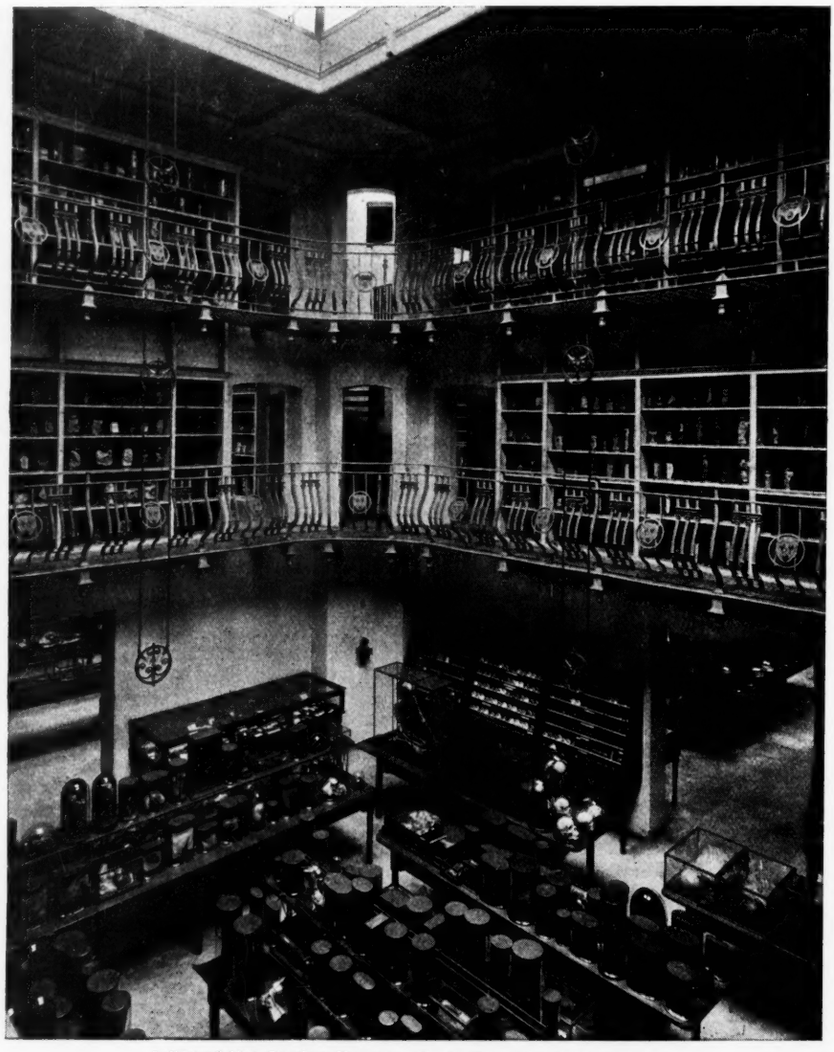


Wills Library and Physiological Department, Guy's Hospital Medical School.

Formerly this road communicated through large gates with the outside road at the back of the hospital, but it has now been encroached upon by the west wing of the new out-patient department—an excellent

building, which runs across the southern extremity of Hunt's House, extending into Great Maze Pond. The ground floor of the new block has been incorporated with the old, but renovated, out-patient department in Hunt's House; and on this floor is now provided accommodation for medical and surgical out-patients, the casualty department, and the resident surgical officer and dressers. In the first, second, and top floors are lodged respectively the departments for diseases of the teeth, the throat and ear, and the eye. This block is the most recent of the additions to the hospital; it was opened during the past summer, and cost £25,000.

Opposite Hunt's House, on the other side of an open space (known as "the Park"), is situated the "Henriette Raphael" Nurses' Home, founded by the late Mr. H. L. Raphael in memory of his wife. It cost nearly £68,600, exclusive of the site and furniture, and towards this sum the founder and his sons contributed over £25,000. It was opened by the Prince of Wales in 1902. It is claimed for it, and we think justly, that it is the most complete institution of its kind in London. There is accommodation for 227 persons, and there are 213 separate bedrooms. One of its features is a swimming bath 50 ft. in length, with twenty dressing boxes. A subway connects the home with the hospital buildings.



A Bay of the Gordon Museum, Guy's Hospital Medical School

Of great interest to those engaged in hospital administration are the new buildings, behind the Nurses' Home, for the Laundry and the Central Power and Heating Installation. They were opened in 1900, and £27,380 were expended upon them. The central installation comprises boilers, dynamos, accumulators, air compressor, pumps, etc. From this building electricity for light and power, and water, hot and cold, hard and soft, are distributed throughout the hospital.

We have said that in the outside of the old buildings very little alteration has been made, but the interior has everywhere been so completely renovated that, to all intents and purposes, the wards are those of a new hospital. Moreover, to the surgical buildings five new operating theatres, with accessory rooms, have been added, and each medical ward has also been supplied with an operating room for cases requiring urgent surgical treatment. In 1904 the upper story of the old surgical block was remodelled and fitted up as an actino-therapeutic department, while, in the lower portion of the building, there is a new isolation ward, which consists of a series of rooms, fitted up with the latest improvements, for the treatment of cases of infectious disease arising in the hospital. Further alterations are in progress. It is proposed to erect three new operating theatres, and the rooms in the front of the hospital, until recently used for casualties, are now being adapted for the purpose of an enlarged electrical, light, and massage department.

The structural changes in the Medical School have been most extensive. In 1897 a large lecture theatre, and several class rooms and laboratories for physiology and histology, were erected. In 1902 a laboratory was fitted up for the Gordon Lecturer on Pathology, and in 1903 the Wills Library was presented to the School by the late Sir Frederick Wills. It is handsomely furnished with carved oak in the Corinthian style, and contains shelf space for 10,000 volumes.

In 1905 the Gordon Museum of Pathology was opened. It was the gift of Mr. Robert Gordon, a Governor of the hospital. This museum is the finest attached to any metropolitan medical school; it contains the unique collection of wax models which were made by Mr. Towne, concerning which we hope to say something in a future article. Adjoining the museum are lecture and class rooms. Most of the school buildings we have just been describing are opposite to Hunt's House, beyond the Nurses' Home. Altogether they cost about £28,000.

In the Dental School (and Guy's is the only general hospital in London which has a separate dental school) a spacious mechanical laboratory has been opened; and plans are under consideration for enlarging the whole dental school to nearly twice its present size.

(To be continued.)

WE are asked to remind intending competitors that the last day for receiving essays for the Hunterian Society's medal is December 31st, 1909. The competition is open to all registered general practitioners in the United Kingdom and the Channel Islands. The essay, which must deal with some subject within the province of medicine, surgery, or midwifery, must be unpublished and original, and based on the candidate's own observations, save for references to the literature on the subject. Further particulars can be obtained from Dr. W. Langdon Brown, Senior Honorary Secretary of the Society, at the London Institution, Finsbury Circus, E.C.

Nova et Vetera.

MODERN FAITH HEALING.

THE MIRACLES OF THE DEACON DE PARIS.

(*Concluded from page 1556.*)

CURES BY CONVULSIONS WITH VIOLENT "AIDS."

IN regard to this furthest development, Montgeron says that many convulsionists insist on getting "aids" so violent that they could not have borne them unless for a time their bodies had been endowed with qualities very superior to those within the range of nature. Such "qualities" only God can give, and Montgeron argues that if He produced in their bodies such marvellous qualities it must be concluded that the terrible "aids" which were necessary for the manifestation of this Divine prodigy belonged to the supernatural order, and were the means by which it pleased Him to make known His power and to diffuse His benefits. In his third volume he says that for a number of years the convulsionists had been inducing people to give them the most prodigious "aids"; stabbing with spikes and swords, and blows capable of killing them not only make no evil impression on their bodies but, what is still more marvellous, are an infallible remedy for all the pains they suffer. Often God has visibly operated under such blows cures in which His infinite power was plainly manifested. It appears from Montgeron's own testimony that not a few even among the Jansenists did not approve of these methods. The *anti-secouristes*, as they were called, thought these things were the work of the devil; but Montgeron argues that it is the work of God if a feeble body receives thousands of blows with a club, and, instead of being smashed, gets relief therefrom. One gathers that there was a hint of Sadism in connexion with these "aids." This Montgeron indignantly denies, saying that the pleasure was not bodily but spiritual, like unto that felt by the martyrs, and awakening in the spectators the desire to expose themselves to everything for the truth. He speaks of these "enormous aids" curing limbs distorted since infancy, making deformed bones straight, lengthening bones that were too short, flattening out humps, reducing swollen hips to their natural size and shape, and even forming legs and feet after the age of 50! After this it is a small thing to be told that absolutely hopeless diseases were cured in the same way. Some examples may be given. He cites Madeleine Durand as testifying that she was cured of a cancer in the mouth. In her deposition, if it may be so called, she states that in February, 1728, when she was 7½ years of age, a swelling showed itself on the right cheek; the eye on the same side was closed by the swelling during three weeks. The inflammation was subdued by means of bleeding, but a small livid tumour remained on the upper gum; this steadily increased in size and became more and more painful. Her condition was made much worse in 1732 by the falling of a piece of wood cased in iron on the affected cheek. Notwithstanding bleeding and other treatment, the swelling increased till at the end of 1732 it was as large as a hen's egg, and extended not only along the upper jaw, which was prodigiously swollen, but upwards towards the temple and below the ear. The tumour, in her own words, drew the skin of the face towards the right side, so that the corner of the mouth was pulled up towards the eye. It was called a cancer, and protruded from her mouth, so that she could only feed herself with the tube of a baby's bottle (see Fig. 11). There was a constant discharge of blood so foul that she could hardly "bear herself." Later a second small growth developed on the lower jaw, and smaller ones like hazel-nuts grew under the skin below the ears and round the neck. Similar growths of largish size formed all over her head. She was very weak and could get little or no sleep for pain. The surgeons whom she consulted said they could do nothing for her. In April, 1733, her mother took her to Paris, where she made a novena in the Church of St. Médard. On May 6th she felt her limbs becoming stiff and lost consciousness for some time. On recovering she felt stronger, and her pains had diminished. On May 24th, which was Whit Sunday, when her convulsions ceased, she was delighted to find that the end of her cancer was smaller and seemed to have been cut without hurting her; during the next two days the tumour diminished still more. It went on diminishing. She recovered her health and became so fat that every month she noticed that her clothes were too short. At the beginning of 1734 she was completely cured and returned to Orleans, her native place, where all who had known her in her previous state marvelled exceedingly. The incurable nature of the disease is certified by a number of surgeons, including Petit and Le Dran, and the cure is testified to by a number of witnesses. Among the certificates is one by M. de Montagni (see Fig. 12), Councillor of the Great Chamber of Parliament, who testified that Madeleine Durand having cut off a portion of her cancer and the blood flowing in abundance

Fig. 11.—MADELEINE DURAND.

Fig. 12.—MADELEINE DURAND.

she stopped it all at once with a few drops of water and the wound ceased even to ooze as if it was covered with a new skin. He says that she used to cut it herself with scissors from time to time. She did this in his presence and that of a number of other persons. The water came from the well of the Abbe de Pâris. He cites the testimony of Le Dran who was present. He saw her again in 1734, the first time he had seen her being in June, 1733.

Another case is that of Jeanne Moler, a girl of 22 to 23, who in 1734 and 1735 suffered from pains in the stomach. These were cured in the following manner: The girl leant against a wall and a very powerful man took a fire-iron weighing 25 to 30 lb. and struck her with it on the pit of the stomach several times with his whole strength. Sometimes he gave her a hundred and more blows. Montgeron himself seems to have experimented first on the girl and then on a wall. After he had struck the girl sixty times, he attacked the wall, on which he made a hole at the twenty-fifth blow. He says that he began by giving her light blows, but she asked him to give her heavier ones, and herself chose a tall powerful man who was among the spectators to be the operator. So terrible were the blows that they shook the wall on which she was leaning. The one hundred blows were given after Montgeron's sixty, which she counted as nothing; she thanked the big man effusively, at the same time reproaching Montgeron with his weakness, want of faith, and pretended timidity. The instrument seemed to penetrate through to the back. When she got the heaviest blows she cried, "Oh, what good this does me! Courage, brother; hit harder if you can!" Another "aid" consisted in the placing upon her as she lay on the ground of a board which entirely covered her. On this stood as many men as could find room on it; there were sometimes more than twenty of them. Another time, the woman lying on her back, a man took a stone weighing 21 lb. and struck her with it several times on the breast as hard as he could. Montgeron says he often saw two large keys being driven into the pit of the stomach immediately below the sternum; they were thrust from below upwards with such violence that the false ribs bent under them. They remained hidden in the body for some time, and on being withdrawn left a hollow large enough to take the whole fist. All this did not cause the slightest suffering, but inexpressible satisfaction. It was the patient's most ordinary remedy for pains of the stomach to which she was subject.

Fig. 13.—GABRIELLE MOLER: THE CROWBAR.

Another case was that of Gabrielle Moler, the young sister of Jeanne. She received "aids" when she was 12, 13, and 14 years old. She is said to have been very pious from infancy. Her piety increased after convulsions, and she went through "prodigious penances." Her "aids" are certified to by twenty-one witnesses, among them Lord Edmund Drummon "of Perth," many magistrates, officers of the King's Household and the army, and several ecclesiastics. She often during the most violent "aids" fell into ecstasy; a quarto volume, says Montgeron, would hardly be enough to contain full account of the "aids." Apparently she had pains in the stomach like her sister. To cure them four bars of iron as thick as the little finger and a foot and a half in length with a blunt point were used. Lying on the ground on her back, four persons pushed these bars with all their strength into the pit of her stomach, the points sinking in to a depth of three inches and penetrating the clothes. She had made expressly for the purpose four spades with sharp edges, which she herself placed immediately under one of her breasts over the clothes and the other above, while the two others were on each side. The breast being thus enclosed by four instruments with cutting edges, four bystanders pushed these with all their strength but without penetrating to the skin. After these operators had exhausted their strength, Gabrielle would often have the operation performed on the other breast. No mark was left, but it was said by women who examined her that the breast was at that time as hard as a stone. Then lying on her back she would place the edge of the spade on her larynx, against which one of the bystanders pushed it with all his might; the only impression was so agreeable and beneficial that she

Fig. 14.—GABRIELLE MOLER: THE WEIGHT.

had the operation done often many times. She would lie on her back and have herself struck violently on the pit of the stomach with an iron bar weighing 48 lb. and more than 3 ft. in length. The blows were so violent as to make the furniture, the windows, and the floors shake. This "aid" pleased her so much that she would have it repeated several times at short intervals, receiving as many as ninety blows. Another instrument used was an iron crowbar, 2½ ft. long, ending in a point. (See Fig. 13.) Her dress and camisole were torn by the point, but it was remarked with admiration that her chemise was not torn. This was doubtless "because God wished to spare this extremely modest girl the mortification she would have suffered if men had seen her skin." Lying on her back she would have blows struck on her chest and stomach with a stone weighing 60 lb. Sometimes she turned face downwards, and had the stone let fall many times on her back between the shoulders and her waist. She also had the stone let fall on the back of her head (see Fig. 14) so that her face seemed to be flattened into the floor and her nose driven into her head. She had herself struck repeatedly on the stomach, the back, and the head while in a kneeling position (see Fig. 15).

Fig. 15.—GABRIELLE MOLER: THE CLUB.

These things are certified to by Poncet, who was afterwards the leader among *Anti-securiostes*. She would place herself on her knees close to a great fire and have her face thrust into it sometimes 600 times on end. Her cap was burned, but not her hair. Gabrielle has the distinction of being the first to use what was called the "aid of the swords." In 1736 she chose the strongest and sharpest sword among those of the spectators; then, with her back against the wall, she placed the point on her stomach and asked the man with the strongest wrist to push with all his strength. The sword was bent, but the girl cried out, "Push still harder!" She did the same thing with her neck, and herself pushed the point of the sword into her mouth to a depth of 6 in. (see Fig. 16). She would put the point against her eyes and under her tongue, but without wounding herself. The testimony of numerous witnesses is cited by Montgeron to these things. Other convulsionists fenced together, thrusting at whatever parts was nearest, and fighting apparently with the greatest violence, one of them representing the people of Israel, another the Gentiles They would seem to stab each other with extraordinary violence, but without wounding each other.

Fig. 16.—GABRIELLE MOLER: THE SWORD.

Here we have got to the stage of the wildest hysteria expressing itself in fraud so gross that only men whose imaginations were excited to the pitch of frenzy could have been deceived. But we need not deny the genuineness of some of the miracles. It is evident from the style in which they are recorded that the descriptions are greatly exaggerated, and in most of them may be noted that perverse delight in suffering and the craving for sympathy which are characteristics of the neurotic temperament. That "paralysed" limbs and hysterical contractures can be cured by mental emotion is well known. The healing of Mlle. Coirin's "cancer" is fully discussed by Charcot in his little essay, *La Foi qui guérit*. He points out that the ulcer, supposed to be cancerous, was a sore of neurotic origin analogous to the stigmata recorded as having been seen in some of the saints. The case, he says, presents the phenomena of hysterical oedema, which, when it reaches a certain degree of intensity, leads to gangrene of the skin and ulcerations similar to those described. He refers to a paper entitled "Neurotic Tumours of the Breast," read by Dr. Fowler before the New York Neurological Society on January 7th, 1890, and published in the *Medical Record* of February 15th, 1890, p. 179. In that paper eight cases of tumours of the breast, some of them larger than a hen's egg, are described. Several of the patients had been recommended by celebrated surgeons to have the breast removed. Dr. Fowler, struck by the fact that all the women were hysterical, subjected them to a treatment in which the psychical element was predominant, with the result that after a longer or shorter time the tumours disappeared. If these patients had been to a celebrated shrine they

would certainly have been held to be cases of miraculous cure. Charcot says that the psychical influence was supplied in the case of Mlle. Coirin by the application of the chemise which had touched the tomb of the holy Deacon. Under the influence of this the oedema disappeared, the local nutrition of the tissues was favourably modified, and the ulcer healed. That this effect was natural is shown by the fact that it took a fortnight for the healing to be complete.

To sum up, we may say that the cases of paralysis and ulcers recorded by Montgeron were cured by faith healing. As for the rest of the wonders recorded in this book, they may be dismissed as illustrations of human credulity, raised to its highest power by theological bias. The will to believe, inspired and stimulated by a definite motive, will make a man believe anything.

THE ROYAL COMMISSION ON THE POOR LAWS AND RELIEF OF DISTRESS.

REPORT ON SCOTLAND.

CHARITY AND THE POOR LAW: OVERLAPPING OF CHARITIES.

PART VI of the Majority Report of the Commissioners deals with the history of charity in relation to Poor Law relief in Scotland, and, although this is a subject which has not any direct bearing on the work of the private practitioner, still it affects him indirectly, inasmuch as by the indiscriminate granting of charity—in many cases to persons not in any way entitled to it—more persons participate in its benefits and tend to become dependent on the exertion of others for the support of themselves and their families. And, as medical practitioners all over the country know, they are often the victims and have to give their services to many without any hope of fee or reward.

History of Charity in Relation to Poor Law Relief.

The Commissioners state that the history of charity in relation of Poor Law relief in Scotland is of peculiar interest as illustrating the process by which the two methods of assistance came to be differentiated. In England the separation took place so long ago that its details and motives became obscured; in Scotland it is so recent as to be practically a contemporary social development. Indeed, it is not even yet complete. In some places charitable funds are still applied by Poor Law authorities to relieve Poor Law cases, while there are still four parishes which have no legal assessment for the relief of these poor.

Believing that a short account of how the poor were cared for in Scotland prior to the introduction of Poor Law relief would interest readers of the JOURNAL, the following statement from the Majority Report relative to charity and Poor Law relief is given:

> The reason why for so long there was no clear line drawn between the two is to be found in the important part played by the National Church, which was on the one hand the collector of voluntary alms, and on the other the recognized legal guardian of the poor. In 1597 an Act of Parliament placed the execution of the Poor Laws in the hands of the Kirk Sessions, and endowed them with the power to stent [that is, tax] the inhabitants of the parish for the relief of the poor. If the Kirk Sessions had exercised their powers history would have followed the same course as in England, and Poor Law relief would have been at once separated from voluntary charity. But there is nothing more remarkable in social history than the steady resistance opposed by the people of Scotland to a compulsory assessment through more than two centuries of legislation. The initiative was left with the Kirk Sessions, and as the feelings of the Church, expressed in various reports of the General Assembly, was that the principle of a compulsory assessment was altogether pernicious, and likely to lead to a great increase of idleness, improvidence, and dissipation, the introduction of the assessment was naturally very gradual.

Professor Smart, who in an appendix to the report gives an account of the history of the Scots Poor Laws prior to 1845, says:

> The main reliance was on church collections, mortifications, and other funds; very seldom on the taxes which the authorities had been allowed to levy since 1579. According to the report of 1818, those funds consisted chiefly of fines exacted for the forms of immorality of which the Kirk Session took cognisance; of fees paid, by immemorial custom, at marriages and baptisms; of the sums drawn for the use of a hearse or a mort cloth belonging to them; and of the interest of legacies bequeathed to their charge. These, with half the church door collections, which went for the relief of occasional cases of want or distress, were under the exclusive administration of the Kirk Session, the heritors having no part.
>
> Prior to 1700, the number of parishes assessed was 3 out of the 700, and these were in counties contiguous to England; before 1740, probably not more than 8, and that in spite of the earnestness evinced by the legislature to establish a compulsory provision in Scotland. Between 1700 and 1800, 93 parishes were added; in 1818, there were 145, and the sum collected came to £43,317. The rule acted on was that an assessment was not to be laid on any parish so long as hopes could reasonably be entertained of a sufficiency of funds for the maintenance of the poor therein being voluntarily contributed, i.e., the tax was counted an auxiliary.

The Majority Report then states:

> No doubt the collections must sometimes have fallen short of what was sufficient; in that case it would sometimes happen that the heritors would rather assess themselves than submit to the introduction of the compulsory assessment. But they were the less likely to fail because it was a recognised duty on the part of rich and poor alike to contribute regularly. Dr. Chalmers [a well-known Scottish divine], in giving evidence before the Select Committee on the Irish Poor (1830) says: "It is nearly the universal practice of the peasantry in Scotland to contribute a little to the collections on Sundays." Where givers were backward the elders had their own way of stimulating them; "in some instances the collection is made more effective by its being received within doors, the elders carrying about what they call a ladle, and making pointed and personal application with it to each individual before the dismissal of the congregation."

Many of our readers will still remember the use of the ladle in some of the parishes of Scotland, as its abolition, as a means of taking the collection, is but of recent date.

The Majority Report then continues:

> The decisive step which ultimately led to the breaking down of the voluntary system was the creation in 1845 of parochial boards for administering the Poor Law in place of the Kirk Sessions.
>
> But even then the compulsory system was not imposed upon the people, those parishes which still resisted the assessment were left in the hands of the Kirk Session, and it was only gradually that the new system was adopted. . . . The fact that the change was voluntary shows that the creation of parochial boards really expressed a great and growing change in public opinion upon this question; and perhaps a change also in the feeling of responsibility on the part of the Church towards the poor.

There were, however, strong opponents to the institution of assessment, foremost amongst whom was Dr. Chalmers. He held the Poor Law which depended upon compulsory assessment in detestation; in the first place as tempting the people away from their natural duties and responsibilities; and, secondly, as treating men harshly in order to restrain their demands. The second evil was a natural outcome of the first, and he held that the only remedy was to rely on the kindliness of private charity when it became necessary to supplement the efforts of the people themselves. But eventually, in spite of the efforts of Dr. Chalmers and a few others, the Church gradually withdrew from its position of guardian of the legal poor, and left the way open for the compulsory assessment administered by a special Poor Law authority.

Not only so, but it has also withdrawn to a marked extent from its previous responsibility for the non-legal poor those who had been maintained from their more private funds. This change is shown in the history of church door collections subsequent to the Poor Law Act of 1845. The Procurator of the Church of Scotland, in giving evidence, stated that prior to the Poor Law Act of 1845, one-half of the ordinary church door collections was to be administered by the Kirk Sessions and Heritors jointly for the aid of the poor upon the roll, while the other half was at the disposal of the Kirk Sessions alone for certain purposes connected with the church services, and for the assistance of the occasional poor. The following statement showing the amount of church collections and the

amount of such expended on the relief of poor and other purposes respectively is interesting:

	Total Receipts.	Expenditure. Relief of Poor.	Other Purposes.
1847 ...	... £17,096 ...	... £8,588	£6,827
1870 ...	... 23,442 ...	... 11,000	12,027
1880 ...	... 33,816 ...	... 8,780	24,302
1890 ...	... 39,541 ...	... 7,968	31,028
1900 ...	... 47,215 ...	... 6,557	40,634
1906 ...	... 50,653 ...	... 5,905	44,595

These figures show that while in 1847 more than half of the ordinary church collections were spent on the relief of the poor, it has been gradually diminishing until, in 1909, little more than one-ninth part is devoted to that purpose. Striking as this change has been, it must not be inferred that the church has lost its interest in the poor. The method has changed, and this has been to some extent beneficial. The "social work" of the church has developed largely. Some four or five years ago the Church of Scotland initiated a central scheme for social work, shelters, labour homes and colonies, prison aid, etc., and on these schemes the church spends a large amount annually. Other schemes for improving the condition of the poor have been established, such as a hospital, home for female inebriates, orphanage, and a large temperance mission and the training of women nurses for work as parish sisters. The amount of money spent by the Church of Scotland on these schemes in 1907 was £7,373 15s. 9d. Other churches are interested in this "social work," and keen interest is taken in the welfare of the poor.

Overlapping of Charities.

All these organizations working for the alleviation of the poor raises the question as to whether there is not a waste of effort, and at the same time of charitable means, through the want of some central means of administration.

The Commissioners have collected a large amount of evidence on the subject, more especially relating to Edinburgh, which they state is a place of great activity in charitable matters.

Beginning their inquiry with the church charities, the Commissioners say that there are 170 churches of different denominations in Edinburgh, concerning the relief funds of all save three of which information was given to the special investigators. As a result of this inquiry they found that

> the total income for the relief of the poor from offertories, subscriptions, etc., not including offertories for hospitals or other charities was £5,232, and from endowments £678, making the considerable total of £5,910. This figure includes £523 raised by six churches for nurses.

With regard to the overlapping of church charities, the Commissioners say they have received conflicting evidence. It is perhaps natural, they remark, that those more immediately connected with the churches should take the most hopeful view. They have strong reason to think that in the towns there is much serious demoralization due to the absence of co-operation and mutual knowledge amongst the various agencies, many of whom are connected with the churches.

In county districts it is possible that overlapping seldom goes beyond supplementing the Poor Law relief.

Quoting what the special investigators say regarding Edinburgh:

> A weak point in the administration of these funds is the absence of co-operation between the various churches and missions, with the result that the same people are often helped by more than one agency. Such a system, or rather a lack of system, must inevitably have a bad effect upon the character of the poor and encourage them to attach themselves to more than one church. A minister told us of a case of a woman who was a full member of his church and in receipt of regular help from the funds, who, to his surprise, was claimed as a member by the minister of another church. Another informant, with long and intimate acquaintance with charitable work in Edinburgh, assured us that competition existed between some of the churches, and relief was used as a means of attracting adherents. With a view to minimizing this evil it has recently been decided in a poor district of the city to hold the mothers' meetings at the same day and the same hour.

As evidence of overlapping in Glasgow, a witness told them how, when applications were invited from churches and missions for a certain charity, the same names were found to be on different lists; 782 names were sent in twice, 79 were sent in three times, 44 were sent in four times, and 1 was sent in six times.

The same want of organization and consequent waste of effort applies to visiting. One witness says:

> The number of Christian workers in Glasgow is unlimited, and I question very much if there is a single tenement in the lowest district of Glasgow unvisited by a Christian worker of some kind. Of course the visiting at present is utterly chaotic, and the visitors know neither what to look for nor what to do. . . . Some years ago we started a Christian Social Union. At one of the meetings Mr. Motion [the Inspector of Poor for Glasgow Parish Council], who is a member, suggested that the best thing we could do would be to take up a typical low district in Glasgow, and see what we could make of it. He mapped out a district, and we sent down a deputation to see what was being done there. We found that the place was practically riddled with missions—and that is a place where my friends in Barlinnie Prison come from. It is a very poor and low district. I give that instance to show that it was not because there were no workers and the parish was left to itself. There was a great deal of visiting going on there, and much money was spent.

Much the same evidence was found in the Report on the Physical Condition of School Children in Edinburgh, which was handed in by Mrs. George Kerr.

In addition to the churches there are, at any rate in the towns, many other agencies distributing relief. In Edinburgh there are 18 charitable agencies which give money help apart from the church charities and those for the assistance of school children. These 18 agencies have a gross income of £5,968, of which about £4,000 is applied in small weekly allowances, for the most part to sick persons or their dependants. There are 12 other agencies for distributing relief in kind, with an income of £2,993. There are at least 9 agencies for the relief of school children, which supplied 145,000 meals in the course of the year. There are pension charities with a gross aggregate income of £42,374, distributing 2,281 pensions. There are many other charities in Edinburgh, but it is chiefly in these that overlapping is likely to occur.

Evidence to the same effect is adduced from Glasgow. There is in Scotland no authority corresponding to the Charity Commission in England, and there is therefore no means of obtaining a complete return of all the charitable trusts, endowments, and mortifications for the benefit of the poor.

Turning to the use to which these endowed charities are put, and their effect on the recipients, the Edinburgh investigators report that they found:

> There are practically no endowed charities which distribute large sums of money in indiscriminate doles at certain seasons of the year—a harmful practice, which we found to be very common in most of the places which we visited in England.

On the other hand, they found that

> The charities applicable for the payment of pensions to poor persons who by reason of age or infirmity are unable to maintain themselves are of very great importance, the gross yearly income of such charities amounting in the aggregate to no less than £42,374.

The investigators were impressed by the large use made of various thrift agencies in Edinburgh. Membership of friendly societies is low as compared with towns of similar conditions in England, being only 6.2 of the population, as against 18.6 and 10.8 in Norwich and York. On the other hand, they remark that, as far as it is possible to judge from the few places they visited, that the co-operative societies and trustee savings banks are made more use of in Scotland than in England. An amount of £4,258,327 held by these thrift agencies in Edinburgh seem to them very remarkable.

Thrift and Medical Charity.

Two points are noted in this connexion:

> The first is that the very large amount of savings would seem to indicate that the abject poverty revealed—e.g., in the Report on School Children—is confined to a small section of the community, and might be greatly reduced if churches, charities, and Poor Law would combine in a consistent and determined effort. The second is that the low membership of friendly societies amongst a thrifty people can hardly fail to be connected with the large medical charities in Edinburgh. There is practically no attempt on the part of the inhabitants to provide medical aid for themselves on a provident basis.

The investigators calculated that 28 per cent., or between 1 in 3 and 1 in 4 of the population, receive free or virtually free medical treatment in the year.

If the in-patients be included, eliminating those who do not reside in Edinburgh, as well as those in paying wards, the percentage is 30 3. What is more remarkable is, that Edinburgh is largely a residential city, and the population is of such a description that it would not be expected that a very considerable percentage would apply for free medical aid.

Overlapping between Charity and the Poor Law.

The Commissioners state that with the voluntary charities there is seldom any attempt to avoid overlapping with the Poor Law. The same is true of the endowed charities to a considerable extent. In order to ascertain to what extent overlapping prevailed, the investigators submitted lists of some of the charities to the assistant inspectors of poor, with the result that they discovered that thirty-six of these on the permanent roll were receiving regular charitable help of which they had no previous knowledge. Summing up the results of their survey so far as it has gone, the Commissioners say they

have seen that there are very large charitable resources, both of money and of personal service, available in Scotland. These are no doubt unequally distributed, especially as between town and country. But everywhere there is the nucleus of effective charity in the strong religious feeling of the people, and the powerful church organizations in which this feeling finds expression. In many places the churches are doing excellent work, in the administration both of their private funds and of the endowed charities; and this is specially true when they are assisting, more or less privately, those members of their own congregations whom they desire to preserve from the Poor Law. But it has also become evident that there are serious defects connected with their work when they pass beyond this field. In the towns there is much competition—possibly unconscious, but none the less mischievous—between the churches and church agencies, and the more unworthy of the poor take advantage of this to draw relief from many sources at once. This is and must be a grave source of moral deterioration just when a strengthening influence is most needed. There is also, with few exceptions, a complete absence of co-operation with the Poor Law, with the result that parish allowances are diminished in view of possible aid from charity, while no distinction is maintained between persons of high character and the ordinary pauper. It is seldom, if ever, realized that, when charity is applied to supplement Poor Law relief in providing the necessaries of life, it merely relieves the ratepayer of his duty without improving the position of the recipient, while, in the long run, not even the ratepayer benefits, owing to the increased number of paupers.

The same absence of co-operation and consequent overlapping is observed in most of the secular and voluntary charities, resulting in the same deplorable waste of effort, and even, it is to be feared, in the actual demoralization of the particular districts in which they operate.

With the endowed charities, again, the process is too often repeated; sometimes, as in the cases of the dole charities, in an aggravated form. On the other hand, when devoted to a good purpose, such as the giving of pensions, they may do excellent work in preserving the more respectable poor from depending upon the Poor Law. But even here defects of administration and absence of co-operation often minimize their usefulness; while there is reason to think that an unduly large proportion of the income derived from them is expended on the salaries of officials or goes to relieve the rates.

RECOMMENDATIONS.

The Majority Report recommends, in regard to the organization of voluntary aid:

1. *Establishment of Voluntary Aid Councils and Committees.*

That in the area of each Public Assistance Authority—that is, in each county, or in each burgh with over 7,000 inhabitants—there should be formed a Voluntary Aid Council, consisting in part of trustees of endowed charities, of members of registered voluntary charities as defined below, of some members of the Public Assistance Authority, and of such persons as ministers of religion, members of Kirk Sessions, members of friendly societies and trade associations, and of other persons, being co-opted members, as may be settled in schemes to be approved by the Local Government Board.

2. *Functions of Voluntary Aid Councils.*

That the duties of the Voluntary Aid Councils should be for the most part not executive but supervisory. The executive work should be assigned to the Voluntary Aid Committees. The Voluntary Aid Council should supervise the operations of these committees generally, and should, as far as possible, maintain the same principles of help and relief throughout the county or burgh, as the case may be. They should collect funds for distribution to Voluntary Aid Committees, and they should allocate funds to poor districts.

3. *Functions of the Voluntary Aid Committee.*

That the Voluntary Aid Committee should aid (1) persons in distress whose cases do not appear to be suitable for treatment by the Public Assistance Committee or parish council, and (2) applicants for public assistance whose cases have been referred to the committee by the Public Assistance Committee or parish council.

4. *Executive Charities Commission.*

That, for a limited period, an Executive Charities Commission should be appointed on the lines of the Educational Endowments Commission, with power to revise the terms of charitable bequests and to frame schemes for their administration.

5. *Local Government Board.*

That, on the expiry of the Commission, its powers and duties should be transferred to the Local Government Board. That the Board should be empowered to supervise the administration of endowed charities and to register voluntary charities or societies which hold any property in land or houses by purchase or on lease.

The Commissioners mention that, as it may be difficult to carry out these proposals in their entirety in certain rural districts, and especially in some parts of the Highlands and islands, the Board should have power to modify them where necessary.

MINORITY REPORT.

The Minority Report does not enter into the question of dealing with voluntary charities and their administration at any great length. They, however, state:

But we wish emphatically to record our dissent from the recommendations of the Majority Report with regard to what is therein termed a Voluntary Aid Council and Voluntary Aid Committees. We entirely object to the proposed establishment, under official auspices, of a non-elective Voluntary Aid Council, and a network of Voluntary Aid Committees in every burgh and county, to serve, not as a supplement to the work of the town or county council or local education authority, but as a substitute for this work. . . . We regard the setting up all over Scotland of a new and additional relief agency not only as generally impracticable, but, even where it may be practicable, as in itself demoralizing and wasteful. We see no reason to suppose that the existing organized charities, or the various churches or benevolent individuals, are likely to be willing to subordinate their own efforts in charitable work, or even to communicate their intentions, to what will necessarily be (seeing that its principal function is to dispense relief) a rival charitable agency any more than they have so far been willing to do this for the Charity Organization Society.

While dissenting from the findings and recommendations of the Majority Report, the Minority do not formulate any scheme to deal with the evident overlapping of charities.

THE UTILITY OF VIVISECTION.

A PUBLIC debate on the utility of vivisection took place at Chiswick Town Hall on November 23rd. The protagonists were Dr. W. R. Hadwen and Mr. H. W. Armit, M.R.C.S., and the meeting, which was held under the auspices of the Bedford Park and Chiswick Antivivisectionist Society, was presided over by Mr. H. S. SCHULTESS YOUNG, M.A., barrister. The hall was well filled, and it was evident that a large proportion of those present had antivivisectionist sympathies. Both speakers were greeted cordially, but Mr. Armit was subjected to occasional interruption, chiefly by ladies. Each debater made three speeches.

Mr. ARMIT opened the discussion by affirming that the whole history of medicine showed that the experimental method of learning was the one by which knowledge was acquired. Thoughout the world the professors at the universities taught physiology, together with that portion of medicine which was dependent upon physiology, as well as surgery and bacteriology, entirely on the basis of

experimental research. The medical man who had been through his studies at the hospital, and had spent five years in learning physiology and anatomy, was guilty of an ungracious act to his Alma Mater and his profession if he claimed that no useful purpose had been served by experiments on animals. He went on to point out that only by means of animal experiments had the topography of the brain been mapped out with any certainty, and the discovery made that certain portions of the brain had the distinct function of governing certain movements of the body. As a concrete instance, he mentioned a case—that of a boy of 8, admitted to the hospital with partial blindness, inability to stand, and frequent convulsions. The surgeon interpreted all the clinical facts of the case in the light of physiology—that is, in the knowledge acquired by experiments on animals—with the result that he was able to remove a tumour together with a cyst from the hind brain, and the boy four years afterwards was absolutely well. Mr. Armit then turned to a question which bulked large during the evening—that of Malta fever. He briefly described what infection really meant, the growth of the bacterium in the body, and the manner in which infection was governed by the resisting powers of the individual. Malta fever was caused by a specific micro-organism —the *Micrococcus melitensis*. Sir David Bruce discovered the germ, and proved that it was the cause of Malta fever. He succeeded in obtaining it from cases of Malta fever, making a pure culture, introducing the pure culture into the body of a small animal, and infecting it with the fever. He (Mr. Armit) could amplify Bruce's proof. So far as his knowledge went, there had been no case of Malta fever in this country through the ordinary channels of infection, yet when Professor Macfadyen was working in his laboratory with the *Micrococcus melitensis*, and an accident occurred by which he and his assistant, Thompson, became inoculated, both of them showed distinct symptoms of Malta fever, with the result that Macfadyen died, while Thompson, whose general health was better and who had greater powers of resistance, recovered, after a severe illness. His (Mr. Armit's) opponent had been to Malta to pick a hole in Bruce's conclusions. Bruce found, when Malta fever was raging in the garrison at Malta, that improved sanitation and a reform of the water supply did no good at all, and ultimately, as a result of the Commission which was appointed, it was found that the little germ causing Malta fever was not carried through water, air, or dust, but through the milk of goats. Out of a military population of some 6,000, about 600—he spoke from memory—were infected every year from goat's milk. An order was then issued banning the milk from the use of the garrison, and the incidence of the disease immediately fell, and was now down almost to zero. That was the result of animal experiment. About 10 per cent. of the goats on the island carried the infection, though the animals themselves were immune. Dr. Hadwen regarded Malta fever and simple continued fever as identical. Simple continued fever was not due to *Micrococcus melitensis;* Malta fever, on the other hand, must be due to *Micrococcus melitensis*, otherwise Macfadyen would not have died. Furthermore, his opponent in that evening's debate thought that Malta fever was a filth disease. Whatever the term "filth disease" might convey to some minds, it conveyed little or nothing to his (the speaker's). The idea of filth, as such, being the cause of Malta fever was absurd.

Dr. HADWEN opened the debate on his side by sounding the moral note. [Mr. Armit had confined himself rigorously within the limitations of the debate suggested by the word "utility."] If there had been progress in brain surgery and in the study of Malta fever through animal experimentation, said Dr. Hadwen, it had only been obtained "in a welter of blood and agony." The sufferings endured by sensible and sentient creatures were such that he would be ashamed to shock the sensibilities of his audience by describing them. Although vivisection had been carried on, more or less, for the last three thousand years, it was only of recent date that it had come so prominently into medical use, and now to experiment on a dog or other small animal was regarded as an essential part of almost all medical investigation. His opponent had stated that it was solely due to these experiments that they had been able to arrive at a knowledge of the centres of the brain. On this point he (Dr. Hadwen) quoted no less an authority than Dr. Samuel West, professor of medicine at St. Bartholomew's Hospital, who, in his presidential address a month ago before the Medical Society of London, said that he supposed no physiologist would deny the debt that physiology owed to clinical medicine, and, further, that the localization of the functions in the brain was largely based upon the observations of clinical observers. A great deal of our knowledge of the functions of the spinal cord, added Dr. West, was due to the patient observation of clinical facts and their association with the results of *post-mortem* examinations. Dr. Hadwen quoted others to similar effect, including Mr. Stephen Paget (*Experiments on Animals*, page 72). If, for example, the speech centre of the brain could be found by careful clinical experience and *post-mortem* examination, and without experiments on animals, why could one not discover coarser and less delicate centres without recourse to such experiments? Coming to the question of Malta fever, Dr. Hadwen said that Valetta, the chief town of Malta, where the greater number of the inhabitants lived, was on a promontory running out into the Mediterranean, and was almost encircled by the great harbour. The harbours of Malta had for centuries been the depository for all the sewage of the island. No ironclad could turn its length without churning up a quantity of sewage emitting a terrible stench. But since extensive drainage work had been carried out in the harbour the health of the sailors had been greatly improved. The increase of health in the navy had corresponded to the progress made in the work of cleansing the harbour. Mr. Armit had definitely stated that the *Micrococcus melitensis* was the cause of Malta fever, mainly on the ground that if certain germs were injected into an animal's body certain symptoms made their appearance. But he (Dr. Hadwen) considered that Sir David Bruce had failed to make out his case. Bruce stated before the Royal Commission that he based the discovery of the *Micrococcus melitensis* as the cause of Malta fever wholly and solely upon Koch's postulates; but it had been proved that only one of those postulates, the second, would hold water—for example, the micrococcus could be cultivated in beef broth. Furthermore, he wished to break a lance with Mr. Armit respecting his assertion that the incidence of the fever fell immediately after the ban was placed upon the goat's milk. The milk was stopped on July 1st, 1906. Now, whilst there were 700 cases of Malta fever on the island in 1905, there were only 120 cases during the first six months in 1906. Yet it was not until after that remarkable reduction that the embargo was placed upon the milk. This showed conclusively that other causes were at work. He (Dr. Hadwen) had been told during his visit to the island of the terrible condition of St. Elmo's Barracks. In the words of one Maltese authority, a mass of humanity was crowded into a veritable ditch. About 2,000 soldiers were lodged there. Twenty years ago, before his mind became obsessed with the germ theory, Bruce himself declared that, if different quarters were only built for the soldiers, Malta fever could be reduced. At the end of 1905, when Malta fever broke out severely in this "veritable ditch," they removed these soldiers to new barracks upon the hillside, and as soon as the men were taken from the low-lying shores of the Mediterranean, where there was practically no tide, and from the vicinity of the moat, which was nothing more than a mass of stinking sewage, Malta fever was strikingly reduced. Only 83 men were left in the barracks at the end of 1905, instead of 2,000, and it was natural to suppose that the decline in the fever returns for the first six months of 1906 was due, partly at all events, to that cause.

Mr. ARMIT, rising to reply, returned immediately to the question of Malta fever. Dr. Hadwen, during his visit to the island, had, by his own confession, gained his knowledge from "a few soldiers' wives and a head nurse," and one piece of information he obtained was to the effect that on the island there was a "veritable ditch." What really happened was this: the officers, although better quartered, were far more affected than the men during the whole time. Sir David Bruce made his experiments, and as soon as he found the *Micrococcus melitensis* in the goat's milk, a number of officers stopped drinking the milk and prevailed upon the men to a certain extent to do likewise.

This was in the early part of 1906, and before the order was actually promulgated on July 1st. During the whole of 1906 there were 161 cases; in 1907, 11; and in 1908, 5. There was a drop, starting, to some extent, before the order, but very marked after the order, until the returns came down almost to *nil*. The Government order was coincident with the stoppage of the fever. With regard to Koch's postulates, he could show his opponent, at the Lister Institute any day, the pure culture of *Micrococcus melitensis*, freed from all body-tissue constituents, and from association with all other germs. This, introduced into an animal's body, would reproduce the disease. He maintained that the first, second, and third of Koch's postulates were absolutely proved in the case of his friend Macfadyen. The fourth postulate was abandoned by Koch himself, who found that he had made a mistake. This last, therefore, should not be called a postulate: it was merely a suggestion. On these grounds he claimed that the case of Macfadyen alone, apart from the important findings of Bruce, proved conclusively that Malta fever was due to this micro-organism. In dealing with brain surgery, Mr. Armit described as astounding Dr. Hadwen's statement that for 3,000 years animal experimentation had been going on. Any history would tell them that, from the second century of the Christian era down to the beginning of the nineteenth, there was practically no vivisection at all, and that was the reason why medicine stagnated during that period. He passed over Dr. Hadwen's quotations because they related merely to opinions and not to facts. It was facts that were wanted supremely in a matter of this kind, and it was a fact that the centres of the brain and their connexion with particular movements had been found out absolutely by means of experiments on animals. Clinical experimentation had but little to do with it. As a matter of fact, the speech centre was now the only centre in the brain respecting which their knowledge was indefinite. Dr. Hadwen had mentioned the name of Hughlings Jackson (in quoting Dr. West) as having based his work on clinical experience. Jackson was really one of the pioneers of the experimental method of localizing the brain centres. He made a most interesting series of observations upon that foundation, and discovered that certain forms of epilepsy were due to certain forms of localized disease. In conclusion, he (Mr. Armit), without wishing to confuse the issue of the night's debate by irrelevancy, held that it was moral in the highest sense of the word to endeavour to relieve pain and suffering, and animal experimentation had undoubtedly led to that result, not only in the case of man, but in that of animals as well, for veterinary medicine had largely benefited by vivisection.

Dr. Hadwen, in his first reply, put forward the assertion that brain surgery was of very little use except in cases of accident where there was a definite lesion, such as a depression, which required no animal experiments to discover, and could, indeed, be seen by the naked eye. With regard to his authority for his statements on Malta fever, he referred his opponent to his recent articles in the *Contemporary Review*. He believed that one of the reasons why the officers suffered more than the men was because of their comparative lack of robustness; they were of different calibre from the rank and file. The statement that the officers' abstinence from milk accounted for the reduction was nothing more than a guess. There were no statistics to prove it. Moreover, if the goat's milk were the cause of the fever, how was it that the civil population of Malta, who had been drinking the milk all the time, suffered twenty-nine times less than the army, and that the naval population suffered five times less? The navy had officers as well as the military. Why did this difference exist between the two branches of the service? Surely it showed that there must have been some other factor at work, and he maintained that that factor was the insanitary condition of the army quarters compared with the healthier situation of the naval men. He did not attach very much weight to the argument that a tube containing the *Micrococcus melitensis* broken in a laboratory in London and inoculating a person had produced Malta fever. It was only possible to have these germs living in a putrid fluid, and Bruce told the Royal Commission that if the fluid were to be filtered and all the germs taken away, a morbid fluid of that description would still produce septicaemia. The Editor of the *Lancet* declared in a leading article on March 20th of the present year that "it must be acknowledged that these postulates are complied with very rarely indeed, if ever," and the same authority went on to say that the question naturally arose whether these so-called causal organisms were really causal or merely secondary. They lived in an age, continued Dr. Hadwen, when germs were supposed to be the origin of everything. In his opinion, in spite of this talk about the germ theory —"which, by the evidence of the Editor of the *Lancet* himself, was now practically exploded"—within the next ten years people would come to regard germs, not as causes of disease, but as the best friends of man—Nature's scavengers to split up morbid matter into its primal constituents, so that there might be thorough oxidation and reversion of that material to its original elemental principles. The finding of germs in connexion with a disease did not prove that the germs had caused it.

In his final reply Mr. Armit said that the whole question arose as to whether the filtrate of a broth culture could produce symptoms of poisoning. If the germ were grown in a fluid of which the constituent was known and was afterwards filtered off, there remained a certain amount of poison produced by the germ itself. The disease thus brought about would be a poisoning—not a septicaemia, as Dr. Hadwen erroneously stated. With regard to Koch's postulates, Sir David Bruce proved his case up to the hilt so far as three of the postulates were concerned, and the fourth, which was not really a postulate, he left alone. He had not gone into the question of Dr. Hadwen's articles in the *Contemporary Review*, as they seemed to him to argue around the point. Either the disease was due to the germ or it was not. If it was not, how did Macfadyen die? The point about the civil population of Malta was easily answered. A resident people acquired, in process of time, a certain amount of immunity; and as to the naval men, doubtless on the boats they did not have the opportunity of drinking the milk so regularly as their comrades in the barracks. Malta fever was not so highly infective that the taking in of a single germ or of many germs would necessarily produce it. Dr. Hadwen was of opinion that simple continued fever—a very loose term—was identical with Malta fever, and quoted statistics. But the disease was not notifiable, therefore the statistics were valueless. With regard to brain surgery, he denied that clinical and *post-mortem* examinations had been the means of discovering brain localization. As a whole, he claimed that if physiology were deprived of its fundament from the vivisectionist's laboratory, medicine would be in the same stagnant position that it was 200 years ago. Thus closed the case for vivisection.

Dr. Hadwen had the last word, repeating his advocacy of clinical and *post-mortem* study, in preference to experimental research. He obtained his figures with regard to simple continued fever at Malta from the general medical officer of health on that island. With regard to the germ theory, he quoted extensively from Watson Cheyne and others to show that germs could flourish in wounds which were absolutely aseptic, and that suppurating wounds might exist without any germs whatever.

The meeting closed with the customary votes of thanks.

NURSES' REGISTRATION.

In an article published on February 13th, 1909, an account was given of the history up to date of the movement in favour of obtaining a legal status for those engaged in the occupation of sick nurse. Since then the position, so far as legislative procedures are concerned, remains practically unchanged. The bill introduced by Lord Ampthill in the House of Lords, and passed by that body after considerable discussion in 1908, was introduced into the House of Commons as soon as it assembled this year by Mr. Ferguson. Shortly after a second bill was brought in by Mr. Findlay, and finally a third bill by Mr. Cleland. The latter had reference only to Scotland, the others to England, Wales, and Ireland, as well as Scotland. None of them, however, came under the consideration of the House, and in May the Prime Minister declined to offer any special facilities for the introduction of the Ampthill-Ferguson bill, on the

ground, among others, that there did not seem unanimity on the question. The deputation to which this reply was given included Sir William Macewen of Glasgow, who, speaking of the existence of a separate bill for Scotland, stated that the support it received from nurses in that country was due to widespread misapprehension of the clauses of the bill which applied equally to the four countries. This had not been seen by Scottish nurses, and they were misled by erroneous statements current regarding it.

Following this a conference at the House of Commons was held between representatives of associations in England, Scotland, and Ireland anxious to see registration brought into force. It was agreed that existing measures should be dropped, and a new bill representative of the common wish introduced next session. Lord Ampthill undertook to act as chairman of a committee of representatives to be appointed by the various associations to draft the bill in question, but the split made evident by the introduction of a separate bill for Scotland has not been closed. Up to the end of last year the Ampthill-Ferguson bill, though admittedly a compromise, seemed to satisfy the leading advocates of nurses' registration in all three countries, but in January there were rumours of discontent in some quarters. In February this found voice in Glasgow at a meeting which brought into existence the Association for the Promotion of the Registration of Nurses in Scotland, with Lord Inverclyde as president, and a second outcome was the introduction of the separate bill for Scotland by Mr. Cleland. This association does not, however, represent the views of all Scotland, so a still further result has been the foundation of a second society—the Scottish Nurses' Association, with Sir William Macewen as president, which is understood to be opposed to the Cleland bill and to favour the principles represented by the Ampthill-Ferguson bill.

Meanwhile a somewhat heated controversy has been going on as to the merits of the two bills, the arguments used being of such a kind as to make it obvious that there is a great deal of misunderstanding as to the degree in which the principles embodied in the bills are opposed, and as to what any of them propose to do. Presumably many of the controversialists have only seen *ex parte* statements instead of the bills themselves. A summary, therefore, of the more important parts of the measures upon the basis of which it is hoped a common agreement may be attained, is here given. For this purpose only the Ampthill-Ferguson bill and the Scottish bill need be considered.

All parties are equally agreed that registration is imperative in the interests of nurses and the public, that the registration should be in the hands of an official body under Government control, that the expense thrown upon nurses should be as low as possible, and that a single bill applying equally to all parts of the United Kingdom is preferable to separate registration for each of its divisions

TITLES AND REGISTERS.

Under the Ampthill-Ferguson bill there would be a common register and a single title, "Registered Nurse," though the names of nurses who had received general training and of those who had specialized in mental nursing would be kept in separate lists. Under the Cleland bill three different titles would be created: "Registered Nurse," "Registered Fever Nurse," and "Registered Mental Nurse." Both bills would make the unauthorized assumption of titles implying that a person is a legally recognized nurse a punishable offence, but do not otherwise interfere with the practice of nursing by untrained or not registered persons.

CONSTITUTION OF THE REGISTRATION COUNCIL.

Under both bills the council consists of sixteen persons, but otherwise differs markedly in constitution, a point which may be considered in two ways—first, as regards the primary status of the members of council; secondly, as regards their functions as representatives.

Primary Status.

As regards primary status, the council of the Amphtill-Ferguson bill would be made up of three persons not necessarily either medical men or nurses, seven persons necessarily nurses, and six persons necessarily medical men. Under the Cleland bill there would be seven persons not necessarily medical men or nurses, seven persons necessarily nurses, and two persons necessarily medical men.

Representation.

Persons Necessarily Nurses. — Under the Ampthill-Ferguson bill the seven persons necessarily nurses would all be representative of registered nurses, four being elected by nurses whose official address for the time being was either in England or Wales, one by nurses whose official address for the time being was in Scotland, one by nurses whose official address for the time being was in Ireland, and one (who must be a past or present matron of a public hospital for the insane) by those in the mental nurses list. Under the Cleland bill, two of the seven nurses would represent general hospitals (of which they must be matrons), three would be elected by "registered nurses," one by "registered mental nurses," and one by "registered fever nurses"—in each case irrespective of place of residence.

Persons Necessarily Medical Men.—Under the Ampthill-Ferguson bill the six councillors necessarily medical men would represent—one the Local Government Board, one the General Medical Council, and one the Medico-Psychological Association of Great Britain and Ireland; the other three would be members of the British Medical Association resident in England and Wales, Ireland, and Scotland respectively. Under the Cleland bill the two councillors necessarily medical men would represent general hospitals, of which they must be "medical superintendents," and they would be selected by the Secretary for Scotland.

Possible Laymen.—Under the Ampthill-Ferguson bill the three persons not necessarily either medical men or nurses would represent the Privy Council, and one of them would be a woman. Under the Cleland bill, of the seven not necessarily either medical men or nurses, two would represent the Secretary for Scotland, and must be laymen, and the others would represent respectively the Local Government Board, the General Board of Lunacy, the Universities of Edinburgh and St. Andrews, the Universities of Glasgow and Aberdeen, and the corporate bodies forming the Conjoint Board in Scotland.

DUTIES OF THE COUNCIL.

The duties of the council in each case would include regulating the admission of nurses to the Register, the taking of proceedings against persons guilty of offences under the Act, and general disciplinary measures, including, in the case of the Ampthill-Ferguson bill, restriction of the practice of registered nurses within their due limits. On some other points the duties vary. Similarly the council under both bills would regulate courses of training and appoint inspectors, decide when and where examinations for admission to the Register should be held, and regulate them, but they differ in that the council under the Ampthill-Ferguson bill would also appoint examiners and arrange their remuneration. In respect of these two latter points, nothing is said in the Cleland bill, but on the other hand, the council under this bill would have to supervise as well as to regulate the training courses.

ADMISSION TO THE REGISTER.

The provisions for the admission to the Register of persons claiming to be so admitted within three years of the date at which the Act came into operation only materially differ in that the Ampthill-Ferguson bill would make special provision for those who have received training in various Government institutions as distinct from ordinary hospitals, while the Cleland bill would limit admission to those holding certificates from institutions approved by the council, or who in addition to having been in bona fide practice as a nurse, produce evidence of training which it regards as satisfactory in the circumstances.

In respect of admission to the Register when it has been in existence for three years there are more distinct differences. Under the Ampthill-Ferguson bill all candidates would be required (1) to produce evidence of adequate training at an institution approved for this purpose by the council; and (2) either to pass an examination prescribed by the council, or to produce a certificate of having passed some examination accepted by the council

in lieu of its own test. It is to be noted in this connexion that any institution conducted under the authority of the Local Government Board, and recommended by it, as also naval and military hospitals, would be deemed approved institutions for the purpose of the Act, and that any other institution aggrieved by a refusal of the council to recognize it as a training school would have the right to appeal to the Privy Council.

Under the Cleland bill right to registration would be constituted by the production of evidence satisfactory to the counci that the candidate was of good character, and had been trained in accordance with the rules framed under the bill in the wards of an institution approved by the council; but no provision is made for appeal by any institution if not approved.

FEES.

Under both bills a fee of £2 2s. would be paid for registration, and an annual fee of 2s. 6d. in the case of the Ampthill-Ferguson bill and 1s. under the Cleland bill. Examination fees are not mentioned in the Cleland bill, but the Ampthill-Ferguson bill would provide that they should not exceed £3 3s. In neither bill is the meaning of the phrase "fever nurse" defined; nor, indeed, in the Ampthill-Ferguson bill is the term used at all, but possibly the interests of women who have received some training in a fever hospital, or some, but incomplete, training in general nursing in some other fashion, are those covered by the penultimate clause in the Ampthill-Ferguson bill. This would make it possible for the council, within four years of the date at which the Act came into operation, to ask authority from the Privy Council to establish a register of associate-nurses, or persons having a lower standard of training than that required for registered nurses, such persons not to be allowed to use the word "registered" except in conjunction with the word "associate," and not to have any vote at an election of a direct representative.

LITERARY NOTES.

THE introductory address delivered by Dr. H. D. Rolleston at the opening of the session at St. George's Hospital has been reprinted in pamphlet form. It is entitled *St. George's and the Progress of Physic*, and contains much interesting matter, felicitously expressed. Dr. Rolleston records the influence of St. George's men on the advance of medicine in the strict sense. One of the most distinguished physicians of the hospital was Matthew Baillie, who held office from 1787 to 1800. In 1793 he published the first book in the English language devoted solely to morbid anatomy. This was entitled *The Morbid Anatomy of Some of the Most Important Parts of the Human Body*, and went through five editions up to 1818. It was translated into French, German, and Italian. Baillie, says Dr. Rolleston, first recognized cirrhosis of the liver, though not under that name, which was invented by Laënnec in 1819, as a disease distinct from "scirrhous" tumours; he spoke of it as "common tubercle" of the liver. Baillie also first pointed out that "polypi of the heart" were really blood clots, and he drew a distinction between cysts and hydatids of the kidney. The work was later supplemented by an *Atlas of Morbid Anatomy* (1799-1802) illustrated from Baillie's private collection of morbid specimens, which he subsequently presented to the Royal College of Physicians of London in 1819. His practice had become so large by the time he was forty that he resigned his position at the hospital. Dr. Rolleston has culled some interesting particulars from the obituary oration on Baillie delivered at the College of Physicians by Sir Henry Halford which throw light on medical practice as it was at the end of the eighteenth and the beginning of the nineteenth centuries. Sir Henry Halford says:

> Before his (Baillie's) time, it was not usual for a physician to do much more than prescribe remedies for the malady, and to encourage the patient by such arguments as might present themselves to humane and cultivated minds.

It would appear also that physical, as apart from visual, examination of the patient, was neglected. Sir Henry Halford says of Baillie:

> He appeared to lay a great stress upon the information which he might derive from the external examination of the patient, and to be much influenced in the formation of his opinion of the nature of the complaint by this practice. He had originally adopted this habit from the peculiar turn of his early studies, and assuredly such a method, not indiscriminately but judiciously employed, as he employed it, is a valuable auxiliary to the other ordinary means used by a physician of obtaining the knowledge of a disease submitted to him. But it is equally true that, notwithstanding its air of mechanical precision, such examination is not to be depended upon beyond a certain point. . . . One of the inevitable consequences of such a system is frequent disappointment in foretelling the issue of the malady—that most important of all points to the reputation of a physician; and though such a mode of investigation might prove eminently successful in the skilful hands of Dr. Baillie, it must be allowed to be an example of dangerous tendency to those who have not had his means of acquiring knowledge, nor enjoyed the advantages of his great experience, nor have learnt, by the previous steps of education and good discipline, to reason and judge correctly.

It is one of the ironies of the fate of great men that, as in the case of Wellington boots, broughams, etc., Baillie's name is perhaps best known by the pilula digitalis co., commonly called Baillie's pill. Another famous physician of St. George's was Thomas Young, to whom perhaps may be applied what was said of Brougham, that if he had known medicine he would have known everything. Dr. Rolleston, however, says that it must not be assumed that Young neglected medicine; he had an extensive knowledge of its literature, and invented a classification of diseases on the lines laid down by Linnaeus in the natural sciences. In 1815 Young published a *Practical and Historical Treatise on Consumptive Diseases*, and he seems to have meditated the compilation of a system of practical physic. Young's observations on consumption have some practical value, as they were made partly on himself. He was not popular as a physician, and was little followed in the wards by the students, who regarded him as a great philosopher, but a bad physician. Edward Jenner was a student of St. George's: it may be well to recall that his fame does not rest wholly on his introduction of vaccination; he discovered that angina pectoris depends on disease of the coronary arteries, the observation being made on no less a person than his friend and teacher John Hunter. Want of space will not allow us to follow Dr. Rolleston through the rest of his record of the achievements of St. George's men; we can only say that in regard to the elucidation of many diseases it is a valuable footnote to medical history.

A Polish museum of the history of medicine has been established in the University of Cracow. It contains objects of medico-historical interest—books, diplomas, prescriptions, samples of ancient drugs, photographs, plans of hospitals, etc. It is intended to excite interest among the students of the university in the history of their art.

We have received the first number of the *Mendel Journal*, which is published by Messrs. Taylor, Garnett, Evans, and Co., Limited, of Fleet Street. The object of the new periodical is to present Mendelism to "a wider public by men who believe in its truth, who foresee its future, and who recognize their responsibilities in the work they do." Another object is "to gather for the Science of Genetics a harvest rich in facts relating to human pedigrees and the inheritance of normal characters as well as of peculiarities." An appeal is made to all who are acquainted with families in which peculiarities and markedly contrasted normal characters have run from one generation to another to send details to the editor. Such contributions will be treated in the strictest confidence; they need not necessarily be published, and will not be published without the consent of all who are concerned, and then only in a form approved by them. While it is clear that medical men have many unique opportunities for acquiring knowledge of pedigrees of this kind, it is hoped that contributions from laymen will also be forthcoming. The journal, which is excellently printed, contains a number of articles, among which may be mentioned as of special interest to medical men the following: Inheritance of Suicidal Mania; Pedigree of Tuberculosis; Pedigree of Skin Colour in Human Hybrids; A Case of Segregation of White Skin in a Quadroon Fraternity. Mr. C. C. Hurst writes on Mendelism and Sex.

British Medical Journal.

SATURDAY, DECEMBER 4TH, 1909.

THE APPORTIONMENT OF THE FIVE YEARS.

ALTHOUGH its Education Committee has for some time past been presenting to the General Medical Council a series of valuable reports giving precise information upon many points in medical education otherwise mere matters of surmise, they have not been as fully discussed by the Council as their importance appeared to merit. The final report issued last May summed up the results of the earlier reports, and ended with only a single recommendation, the object of which was to secure that an adequate share of the curriculum should be given to the study of the subjects of the final examination, which were thought often to be starved out by the encroachments of other subjects which should have been completed earlier in the student's career. The recommendation, as we have already ventured to hint, was cumbrous and likely to be difficult of application, although its aim was admirable; to this aspect of the matter we need not recur, as the recommendation finally adopted after the discussion is simple, and is not open to objections of the nature indicated. A little disappointment was felt and expressed that the chairman in his opening remarks should have asked that the discussion should be limited to the matter of the recommendation which dealt with one only of the several questions submitted to the committee, and that one which many would regard as not the most important. The proposed limitation soon proved to be impracticable, indeed Principal Yule Mackay himself, perhaps unconsciously, in his own remarks included much that was not closely relevant to this single issue. It did not in fact lend itself to entirely separate treatment, and succeeding speakers made wider digressions into such subjects, for instance, as the question of the adequacy of a period of five years for all the subjects of a modern curriculum, and the proper place for the preliminary scientific subjects.

In the course of the discussion Sir Thomas Fraser argued that after all the student could only be taught how to learn, and was not to be regarded, when turned out "qualified," as by any means a finished product—a proposition which might have commanded more approval had he not gone on to make the somewhat startling proposition that too much stress should therefore not be laid upon the final subjects. This is subversive of the fundamental idea of qualification, and it was suggested by Dr. Little that the speaker's view might be influenced by his association with a school at which the numbers of the students were very large in proportion to the clinical material available, and was at all events not applicable to schools where other conditions prevailed. It was asserted, for instance, that at the Irish schools the physical and chemical methods of diagnosis were taught at a very early period of the student's career, whilst later very ample opportunities of clinical study were afforded to each and all.

It will be remembered that the statistics collected by the committee showed that only some 34 per cent. of all students qualified within five and a half years, the remaining 66 per cent. taking six years or more, and that the average of the whole was well over six years, although a material proportion of the students at certain schools succeeded in qualifying within the five years. Principal Mackay stated in answer to a question that the proposed new rule would only affect 3 or 4 per cent. of all students; and this statement had perhaps a damping effect, because many members felt that if so small a percentage was affected the alteration was hardly worth the time expended upon its discussion, especially as there was a consensus of opinion as to its general desirability. The estimate, however, was challenged, and it was asserted that, according to the tables given, a much larger number would in fact be affected.

The discussion turned partly upon the question whether it was desirable to introduce any sort of "block" into the student's career—that is to say, whether at any point, and if so, at what point, it should be laid down that time for a particular group of studies should not be allowed to count until the examination in the previous set of studies had been passed. Though some difference of opinion upon the desirability of any form of block was discovered, no alternative scheme was suggested by which full time for the study of the final subjects could be secured, and the principle of a block was accepted. After a division on the point whether two and a half years—that is, the half of the curriculum period—or only two years should be allocated to final subjects, a recommendation was adopted that a period of two years after passing the examination in anatomy and physiology should be required by the licensing bodies before admission to the final examination.

This is the only recommendation which the Council actually made; but inasmuch as several other questions relating to the curriculum had been addressed to the committee, and these had not been fully discussed, it was felt that the treatment the subject had received was incomplete, and on the motion of Sir Henry Morris a fresh reference was made to the committee, which was invited to consider the proper place for the preliminary scientific subjects, and was asked to prepare a draft scheme for the arrangement of the subjects within a period of five years, so that the Council might have before it a suggestion for a minimum course.

The appropriate time for the discussion by the Council of these issues will obviously not come until after the committee has reported, but an instructive fact was mentioned in introducing the motion. It is well known that the two English Royal Colleges allow chemistry, physics, and biology to be studied at secondary schools selected as having adequate facilities. It has been found that students who have availed themselves of this permission are, to the extent of from 6 to 8 per cent., actually more successful in passing the examination than those who have taken those studies at medical schools. This practical result throws doubt upon a tolerably recent conclusion of the committee to the effect that adequate facilities do not at present exist in a sufficient number of secondary schools for a change in this direction to be contemplated.

Somewhat closely linked with these considerations was the motion of Dr. Saundby requesting the Examination Committee to report upon the question whether it is desirable to allow students to pass in the several subjects of the final examination in instalments. The adoption of this reference seems to imply that

some at least of the members of the Council think that this should not be permitted. If it is, and if advantage is taken of the permission, it is evident that the five-year period must *ipso facto* be exceeded, and it was suggested that it is not fair to parents to call the curriculum one of five years, when in fact, ignoring the case of exceptionally brilliant students, it is always exceeded.

We may congratulate the Council upon having taken a step in advance in securing that the final subjects shall not be starved by the earlier, but additions to the curriculum are constantly being made and nothing is ever subtracted from it, so that the question of lightening it requires careful consideration. It is to be regretted that the course taken by the University of London, and strongly supported by Sir William Whitla in his address to the British Medical Association at Belfast, which has the effect of lightening the curriculum by causing the teaching of the whole of the preliminary and intermediate subjects to be directed with an eye to their ultimate application, has not, so far, received the attention, or at all events the spoken attention, of the Council, though this question may appropriately be discussed in connexion with the further report the committee has now been instructed to make.

VOLUNTARY AID DETACHMENTS.

WE referred last week to an address given by Sir A. Keogh to the British Red Cross Society on the relation of that society to home defence, and as it seems from several communications which we have received that there are many who do not appreciate the relative position of the various authorities to be associated in the relief of the sick and wounded in case of the outbreak of war, the following remarks may be useful. The Territorial Force has its complete organization at the front, its regimental medical officers and trained bearers; they meet the bearer division of the field ambulance, and this division is responsible for the conveyance of the sick and wounded to the field hospitals. At the base the Territorial Force has its general hospitals so far equipped and trained in peace as to form a complete nucleus capable of expansion when required. But there are two gaps. The first is that the conveyance of sick and wounded along the lines of communication between the field hospital and the general hospital is not provided for, and the second that the working personnel of the general hospitals themselves would have to be increased on mobilization; it is these two gaps that the county associations have been called upon to fill by the organization of Voluntary Aid Detachments. In this task they are being assisted by the Red Cross Society and the ambulance department of the Order of St. John of Jerusalem.

The Territorial Army and the Red Cross Society are both established on a county basis and each county is asked to provide Voluntary Aid Detachments. The mode of provision is in the hands of the county associations, but it is officially suggested that the Territorial County Association should make use of the organization of the county branches of the Red Cross Society.

The Voluntary Aid Detachments would be required to provide the establishments for the removal of the sick and wounded, that is to say, the clearing hospitals, rest stations, evacuating stations, and ambulance trains or other means of conveyance, and supplementary personnel required for general hospitals and convalescent homes would be furnished from this source. There is plenty of work for men and women, the latter being employed chiefly in forming railway rest stations, in preparing and serving refreshment to the sick and wounded during the process of evacuation by railway, in taking temporary charge at the evacuating stations of severe cases unable to continue their journey, for duty in ambulance trains, or for nursing or cooking in the clearing hospitals. Briefly, the training required is, for both sexes, first aid, elementary nursing, and sanitary duties; for men, stretcher exercises, clerical duties, and what is termed training for carpenters and mechanics—that is to say, some practice in improvising and constructing splints, stretchers, bedsteads and appliances, fitting up vehicles for the carriage of the sick; and for women, training in cookery, care of clothing and bedding, and disinfection of the same.

The Red Cross Society lays it down that only those who possess both first aid and field nursing certificates of the St. John Ambulance Association shall be permitted to join a Voluntary Aid Detachment, so that as a preliminary the County Association must arrange for the usual courses of instruction by the teachers of the St. John Ambulance Association to be given to persons who wish to enlist in the detachments in various parts of the county. The contention of some of our correspondents that there is no reason why medical men should be called upon to give this instruction without remuneration appears to be well grounded. We believe that a proposal of the kind has only been made in a few instances, and though there may be exceptional cases in which it can be justified, yet, as a general rule, medical men should not be expected to give such instruction gratuitously. When a man or woman has qualified for enrolment in a Voluntary Aid Detachment by obtaining the two certificates mentioned, any further instruction required will be on a somewhat different footing. It is true that when a unit of the Territorial Force is called up for special training, all ranks, including the medical officers, are paid at army rates for their services during the period of training, but the Voluntary Aid Detachments will not be called up for any definite periods of training; in fact, a detachment would probably only be called upon to assemble some two or three times in the course of a year, in order that the commandant may be satisfied that it would be ready when called upon. The commandant of each detachment, whether men's or women's, would be a medical man or woman, and this officer would be immediately responsible that all members of the detachment knew their duties; but many members of the detachment—including as it would medical men, pharmacists, sanitary officials, nurses, and cooks—would not require any definite extra instruction in their special duties. The task of keeping a Voluntary Aid Detachment efficient would therefore be much less arduous than that of keeping a unit of the Territorial Force efficient.

In time of peace the Voluntary Aid Detachments will be immediately under the County Director, who is appointed by the local (county) branch of the Red Cross Society; he will be responsible for the efficiency of the detachments, and will be controlled by the committee of the county branch of the Red Cross Society, which in turn will be responsible to the County (Territorial) Association. On mobilization

the detachments would be handed over to the administrative medical officer of the field army concerned. An officer to be called the "Director of Clearing Hospitals," who would be preferably a retired officer of the Royal Army Medical Corps or of any regular army service, would be appointed to each division of the Territorial Force, and to him would be allotted so many Voluntary Aid Detachments as were found necessary to meet the requirements at the moment.

PROPOSED LEGISLATION ON ANAESTHESIA.

AMONG the matters dealt with by the General Medical Council at its recent meeting, a report of which appears in this week's SUPPLEMENT, was the proposed legislation on anaesthesia. In the JOURNAL of January 2nd, 1909, p. 45, a summary was given of the opinions on this subject which found expression in a debate at the Medico-Legal Society,* and of a Bill to regulate the administration of general anaesthesia which was submitted by the Privy Council to the General Medical Council. The chief provisions of that Bill were the following: "(1) That no one but a registered medical practitioner should administer, or cause to be administered, any drug or substance with the object of producing unconsciousness during any medical or surgical operation, act or procedure, or during childbirth, under a penalty not exceeding £10, and, in the case of a second or subsequent conviction, to a penalty not exceeding £20, unless the person was acting under the immediate direction and supervision of a legally qualified medical practitioner, or if he had reasonable grounds for believing that delay in obtaining the services of a qualified medical practitioner would have endangered life. (2) That all examining bodies recognized by the General Medical Council should require that all candidates for final examinations should have received thorough instruction in anaesthetics, and should have personally administered anaesthetics under the supervision of their teachers."

The Council, at its meeting in November, 1908, approved the principle embodied in the first clause, but objected to the second. At its recent meeting the Council had before it the report of its Anaesthetics Committee on the Bill introduced into the House of Commons on June 22nd by the late Dr. Cooper. The text of that Bill was published in the SUPPLEMENT of July 10th, 1909, p. 61; it was backed by Sir Walter Foster, Sir William Collins, Sir John Benn, Mr. Acland Allen, Mr. Barnes, Dr. Rutherford, Mr. Bertram Straus, and Mr. Carr-Gomm. The report of the Committee, which was adopted by the Council, was in favour of restricting the administration of anaesthetics during medical, surgical, obstetrical, and dental operations to duly qualified surgeons, but of permitting certain specified anaesthetics, described as such, to be used by duly qualified dentists during dental operations. It was suggested that the schedule of specified substances should be added to from time to time, as new anaesthetics might be discovered, as is done in regard to the poison schedule of the Pharmacy Act. For the public safety it was held to be desirable that the anaesthetic should be administered by a qualified person other than the operator so that his mind should not be diverted from the condition of the patient. A clause in the Bill which provides that "any registered medical practitioner who gives a certificate of death in the case of a person dying while under the influence of an anaesthetic, shall be liable, on summary conviction, to a penalty not exceeding five pounds," was objected to as creating, without any necessity, a new offence of a highly penal character. The object which the clause seemed to be intended to secure was to obtain correct death registration statistics, but this could be secured by a system of notification such as was in force in the case of infectious diseases. It was recommended that for the present it should be left to the Licensing Bodies to determine the precise form of evidence of adequate practical instruction in the administration of anaesthetics which should be required, and a recommendation was added to the effect that due provision should be made for the practical instruction of dental students in the administration of anaesthetics.

The General Medical Council, therefore, does not think fresh legislation on the administration of anaesthetics desirable. It seems to think that "recommendations" which it may see fit to make from time to time to the Licensing Bodies, are sufficient to meet the needs of the case. We would respectfully point out, however, that "recommendations" made on other matters by the Council have sometimes been treated with more or less polite indifference by certain licensing bodies; and it is at least conceivable that the same thing might happen again. The public safety is the chief consideration to be kept in view, and it must be confessed that the frequent reports of death under anaesthesia published in the newspapers must tend to undermine public confidence either in the anaesthetics used or in the administrators. We do not think the Council has shown the appreciation of the importance of the question or the sense of its responsibility alike to the public and to the profession that might have been expected, and it seems clear that a more comprehensive inquiry into the whole subject is needed than the relatively narrow reference submitted to the Anaesthetics Committee of the General Medical Council. Certain aspects of the subject will be considered by the Departmental Committee on Coroner's Law, before which evidence on behalf of the British Medical Association will be given in the course of the present month. The report of this Committee will no doubt throw some light on the questions at issue. If it should prove that the subject has not been adequately handled there, it will become necessary to seek a fuller inquiry.

* See *Transactions of the Medico-Legal Society*, vol. v, 1908; and BRITISH MEDICAL JOURNAL, 1908, vol. i, p. 747.

DEMONSTRATION MEETINGS.

THE Newcastle Division of the North of England Branch has recently organized a series of monthly winter scientific demonstrations to which not only other members of the Branch, but all medical practitioners in the area received invitations. A complete syllabus of the whole of the meetings was sent out in advance, in order that all wishing to attend might have previous knowledge of all the subjects of the demonstrations. Each meeting takes the form of six clinical demonstrations, limited to half an hour each. An effort has been made to render the subjects and material of the demonstrations as practical and varied as possible, and to some extent they assume the character of a post-graduate course. Between seventy and eighty medical men from many parts of Northumberland and Durham attended the first meeting, which was held in the Royal Victoria Infirmary on November 19th, and it was generally felt that the first

trial (at any rate in this district) of such a series of demonstrations under the auspices of the British Medical Association had been a great success. Sir Thomas Oliver demonstrated some cases of splenomedullary leukaemia, and gave a summary, illustrated by drawings, of the clinical and pathological aspects of the disease. Mr. Rutherford Morison gave a demonstration on diseases of bone, especially dwelling on the symptoms and diagnosis of the acute infective types. Patients and a number of pathological specimens illustrative of his remarks were shown. Dr. McCracken and Dr. Ruxton conjointly gave a full account of their own and other workers' observations in regard to Mongolian imbecility; and several children of various ages suffering from this condition afforded a practical illustration of its clinical features. Mr. W. G. Richardson demonstrated patients suffering from carcinoma of the breast, and exhibited specimens illustrating the more radical methods of operating. He entered at some length into the manner by which the disease spreads and the consequent necessity for an early wide removal of all the infected area. Mr. Percival gave a demonstration on some of the more common forms of eye injuries, illustrated by patients and specimens, and dealt especially with many practical questions in regard to diagnosis and treatment. Dr. Bolam showed several cases of xeroderma in different stages, and after dealing with the etiology and pathology of the condition detailed the lines on which treatment should be conducted. These demonstrations will be continued at monthly intervals during the winter session, and are, if not a wholly new departure, at least a most interesting development of an idea which has led to the holding by the Edinburgh Branch, and by the Newcastle Division itself, of special clinical or scientific meetings, at which demonstrations clinical, pathological, and bacteriological, have been the chief feature.

THE ANNUAL MEETING IN LONDON, 1910.

AT the annual meeting of the British Medical Association in London next year, over which Mr. Butlin, P.R.C.S., will preside, the Address in Medicine will be delivered by Dr. Mitchell Bruce, consulting physician to Charing Cross Hospital and the Brompton Hospital for Consumption, and the Address in Surgery by Mr. Gilbert Barling, surgeon to the General Hospital, Birmingham, and Dean of the Medical Faculty of the University. Very satisfactory progress has been made in the organization of the Sections, which, as already announced, will be twenty-one in number.

THE SCHOOL OF THE COLLEGE OF SURGEONS IN IRELAND.

IN the course of his address to the Belfast Medical Students' Association, which is published elsewhere in this issue (p. 1593), Dr. Gibson gave utterance to his opinion, which will not fail to carry conviction owing to any lack of force in its expression, that the Medical School of the Royal College of Surgeons in Ireland has, during the recent reorganization of higher education in Ireland, experienced at the hands of the Government a want of sympathy which amounts to practical injustice. Into the case, if such there be, which the college may have against the new National University, we do not propose to enter. We hope that the statements made by the President of the college, and now echoed by Dr. Gibson, may misinterpret the motives by which those who are guiding the National University are actuated. We can only regard it as most satisfactory that in Ireland the principle of State assistance to medical educational colleges should have been recognized. That it is necessary for the State to assist institutions for higher education, in the teaching of science, has again and again been insisted upon by those most competent to speak, and illustrated by references to the example of Germany. More than six years ago Sir Victor Horsley, in an address in the Medical Faculty of the University of Birmingham, showed that this principle applied equally to the medical as to other scientific faculties. He quoted Sir E. Ray Lankester's epigrammatic statement that the growth of science in the present day is to be measured rather by geometrical than arithmetical progression, and showed that in the matter of laboratory accommodation alone the minimum demands of the present day were very far in excess of those of even a generation ago. He scouted the idea that an efficient medical school could be maintained out of the fees of the students; such fees, he said, were in reality but a slender contribution to the maintenance of the necessary provision, and he added that it was unjust to expect parents or guardians of a medical student to bear the heavy expense of a professional education. Neither could the benevolence of the pious founder or the generous subscriber be expected to fill the gap, and he argued that therefore, and for the further reason that the State controlled and required the services of the medical profession, it was right that the State should be called upon to make an adequate financial contribution towards the erection and maintenance of suitable buildings, and the provision of an adequate teaching staff. Now the school of the Royal College of Surgeons of Ireland has won for itself a high reputation during the last century, and has supplied many distinguished men for the service of the public and of the State. During the last generation, and especially within very recent times, by hook or by crook and at serious sacrifice, the college has spent money in the effort to maintain the highest possible standard of efficiency in the school; but the contest is an unequal one, and we venture to think that the prayer of the memorial to the Chief Secretary which has just been presented by the President, Mr. Lentaigne, on behalf of the Royal College of Surgeons in Ireland, ought to receive Mr. Birrell's early and most favourable consideration.

DUKE KARL THEODOR OF BAVARIA.

BY the death of His Royal Highness Duke Karl Theodor of Bavaria, the head of the ducal line of the house of Wittelsbach, brother of the ill-fated Empress Elizabeth of Austria, father of the future Queens of Bavaria and of the Belgians, the profession has lost a member who, besides being a prince of rank, was what the French call a "prince of science." After serving in the army he devoted himself to the study of medicine. He entered himself as a student at the University of Munich, and in due course took his degree. He then settled down at Schloss Tegernsee in the Bavarian Alps, and practised daily in the local hospital, where he treated all the eye cases. Later he opened a private eye hospital in Nymphenburg Street, at Munich. He is said to have performed some 500 cataract operations. He was the author of works entitled "Contributions to the Anatomy and Pathology of the Vitreous Body" and "Contributions to a Pathological Anatomy of the Eye in Kidney Diseases." His Royal Highness was 70 years of age.

EXEMPTIONS AT EXAMINATIONS.

TWO cases which illustrate the inconveniences which may arise in connexion with the granting of exemptions at final examinations to candidates who have passed a certain subject, or have reached a certain stage

in the curriculum of other licensing bodies, were considered by the General Medical Council during its recent session. It appears that at an examination last year the Apothecaries' Hall, Ireland, exempted a candidate at its final examination who produced evidence that he had passed an examination in midwifery elsewhere. The Secretary of the Hall had previously applied to the Registrar of the General Medical Council to know whether there was any rule of the General Medical Council which prohibited a licensing body examining a candidate in one or more subjects in the final examination, he having passed the remaining subjects elsewhere. The reply was to the effect that there was no rule of the Council on the subject, but that all exemptions must be reported to it. The matter, however, is governed not by a rule of the Council but by Section 3 of the Medical Act, 1886, and it appears that as long ago as May, 1903, the Examination Committee of the General Medical Council made a report upon a case in which a candidate had been exempted from a part of the final examination of the Apothecaries' Hall, Ireland, held in July, 1902. The report stated that the candidate in question had, some eighteen years earlier, passed the examinations of the Royal College of Surgeons of England with the exception of those in medicine and midwifery. The Council's inspector of the examination at the Apothecaries' Hall of Ireland reported that this candidate passed creditably in these two subjects, and he thus became entitled to the diploma of the Hall. When commenting in 1903 upon this incident the Committee said, "This recognition of a final subject passed before a different licensing body is quite irregular, in view of the opinion expressed by the Council's legal adviser, that 'the examination must be one examination, in the sense that one medical authority or combination of authorities must conduct the whole examination of the candidate—that is, that he must be examined in all three subjects by one medical authority or combination of authorities.'" When Dr. D. C. McVail, chairman of the Examination Committee, drew attention last week to the fresh infraction of the Act by the Apothecaries' Hall of Ireland, the defence made by Dr. Adye-Curran, the representative of the Apothecaries' Hall, was practically to the effect that the body he represented knew nothing about the incident which Dr. McVail "had fished out from the annals of the past," that is to say, from the proceedings of the Council in May, 1903.[1] On that occasion, also, the then representative of the Apothecaries' Hall pleaded ignorance. The Council has now passed a resolution regretting that a procedure should again have been adopted by the Apothecaries' Hall in Ireland, which, in the opinion of legal counsel, was illegal, and a further resolution resolving to draw the attention of the Apothecaries' Hall of Ireland to the opinion given by the Council's legal adviser. The Council no doubt feels a special responsibility with regard to the examinations of the Apothecaries' Hall of Ireland, since it appoints the surgical examiners, and receives reports from them, but it has now further resolved to call the attention of all the licensing bodies to the legal opinion referred to. The other case has to do with the *Dentists Register*. An applicant possessing certain diplomas from Colonial bodies asked to be registered on the strength of them. No question of reciprocity arose, inasmuch as the Dentists Act differs from the Medical Acts, since it merely requires the Council, before registering a name, to ascertain that the regulations of the licensing bodies concerned afford sufficient guarantee of the possession of the requisite knowledge and skill. The Dental Committee of the Council therefore, was bound to make inquiries with regard to the conditions under which the diplomas submitted were obtained, whereupon it was discovered that the applicant had obtained, first from one body and then another, exemptions so numerous that the evidence as to education and curriculum was confusing and unsatisfactory. It appears that the applicant in the first place obtained a diploma in a British dominion after a modified examination instituted for those in a state of pupilage when an Act for the regulation of the practice of dentistry was passed. He then entered University X in another British dominion; the regulations of University X were, in the matter of examinations, elastic, for any person legally qualified in any portion of the British Empire was admitted to its final examination without other attendance of any sort at all. University X became amalgamated with University Y in the same dominion, and a period of grace was allowed to students of University X for the completion of any curriculum in force at that university, and upon its completion they were to be admitted to examination by university Y, and, if successful, to receive its degree. That was what happened in the case of the applicant. Such a curious train of circumstances is not likely to arise again, but its occurrence is proof that the General Medical Council is fully justified in carefully criticizing the claims for exemption in subjects of the final examinations for a dental diploma also.

[1] See also BRITISH MEDICAL JOURNAL, 1903, vol. i, p. 1282; and SUPPLEMENT, 1903, pp. lxvii and lxxxix.

CHARITY AND THE POOR LAW IN SCOTLAND.

AT p. 1628 will be found a summary of that part of the Majority Report of the Poor Law Commission dealing with the relations between charity and the Poor Law. The extracts made from the report prove that there is much waste both in money and energy amongst the charitable institutions and agencies in Scotland, and that some legislative interference is necessary both for the welfare of those for whose benefit these charities are intended and for the proper maintenance of the charities themselves. It was brought out in the evidence that large sums of money are available for the relief of poverty independently of the Poor Law. In Edinburgh alone the amount available for distribution from charitable funds amounts to £289,000; other towns in Scotland are largely provided for. Were these funds managed in a thoroughly business manner much relief might be afforded to deserving and worthy people. It has been abundantly proved, however, that instead of being spent for the relief of deserving poor, the tendency has been to demoralize the people; this is attributed to the want of co-operation and mutual knowledge amongst the agencies, many of which are connected with the churches. In many cases recipients were getting money from several funds without those who were responsible for the management of these charities being aware of the fact. To remedy this want of co-operation and overlapping the Majority recommend the establishment of voluntary aid councils and committees to manage the funds and dispense the charities. But something more is required to place all these charities on a sound basis. The Government should appoint a commission to deal with the endowments on much the same lines as that appointed to deal with education some years ago.

NURSES' REGISTRATION.

IN another part of this issue is published an analysis of the two bills, laid before the House of Commons at the beginning of last session, which, it is hoped, will form the basis of an agreement between the two sections of those interested in the nursing movement with respect to a new bill to be introduced next

session. It seems fairly obvious that the separation between these two parties owes much of its width and apparent importance to misunderstanding in the rank and file of the position which will be created by the passage of one bill or the other. Harking back to certain questions of principle on which some of our correspondents have dwelt, it may be pointed out that, so far as the constitution of the governing councils is concerned, the Ampthill-Ferguson bill would give a preponderating influence on the council to those most directly interested in the sound management of the profession of nursing—namely, the nurses themselves, and the medcal men, as whose assistants trained nurses act. The Cleland (or Scottish) bill, on the other hand, would place most of the voting power in the hands of representatives of training schools and of universities and other like bodies, which in their corporate capacity have no necessary connexion with nursing, while the medical profession as such would not be represented at all. In regard to admission to the Register, the Ampthill-Ferguson bill would establish a system under which the primary requirements of a nursing curriculum would be laid down, and only those admitted to the Register who had conformed therewith and had passed either the Nursing Council's own examination or some other examination which it accepted as an equivalent. The Cleland bill, on the other hand, would impose examinations only on candidates trained at schools which the Nurses' Board did not deem sufficiently large to hold their own examinations; all other nurses it would admit to the Register on the strength of certificates of their having been trained at various approved training schools. Both bills would give specific recognition and representation to mental nurses, and the Cleland bill would treat fever nurses on the same lines. The Ampthill-Ferguson bill, without using the term "fever nurses," would necessarily involve the acceptance of certificates of training from institutions supported by the rates and recommended by the Local Government Board. The fees would be slightly higher under the Ampthill-Ferguson bill. The Cleland bill applies only to Scottish nurses, but would make their title of Registered Nurses legal both in England and Scotland. The Ampthill-Ferguson bill, on the other hand, applies to all four countries—England and Wales, Scotland and Ireland.

A TUBERCULOSIS "PREVENTORIUM."

A FEW months ago a cottage at Lakewood, New Jersey, at one time occupied by Mr. Grover Cleveland, formerly President of the United States, was fitted up as an institution to which was given the name of a tuberculosis "preventorium" for children. We hasten to say that we are in no way responsible for this addition to medical terminology, which we find in the *Boston Medical and Surgical Journal*, from which the following facts are taken. Since July last the cottage has been used for the reception of children of the New York tenements who have become infected with tuberculosis, and the disease is treated in its earliest stages. Ninety-two children, ranging from 4 to 14 years of age, have been sent to the cottage from thirteen clinics or hospitals, and the physicians in charge at Lakewood have reported that all have shown marked improvement. On November 9th a conference was held at the residence of Mr. Henry Phipps, in New York, at which it was decided to make the institution permanent and to enlarge its scope. Mr. Marcus M. Marks, the President, stated that it had been founded to cope with the alarming condition revealed by the discovery of 23,325 cases of tuberculosis among children in New York City in 1908, and Dr. Herman M. Biggs's estimate that there are 40,000 children in the tenements infected with the disease, most of whom could be saved by proper treatment. It was announced that Mr. Nathan Strauss, who made the gift of the Cleveland cottage, had given the greatest part of the stock of the Lakewood Hotel, valued at £100,000, the proceeds to be applied to the running expenses of the "preventorium." Miss Dorothy Whitney, daughter of the late Secretary, William C. Whitney, has given £20,000 for the establishment of a department in practical instruction in carpentering, basket-making, and other branches of industry, and other charitable persons have contributed. It is the aim of the trustees to increase the capacity of the institution to 400 beds. For this purpose they hope to secure an endowment of £200,000, the interest on which will pay 40 per cent. of the running expenses. In addition, £12,000 a year will be needed, and this it is proposed to raise by subscriptions and membership fees. Dr. Alfred F. Hess is in active charge of the medical work, the consulting physicians being Drs. A. Jacobi, H. M. Biggs, and S. S. Goldwater.

VACCINATION IN WORKHOUSES.

THE question of the vaccination of children born in workhouses has been the matter of considerable discussion during the past few months. The National Antivaccination League has addressed a circular to boards of guardians on the subject, and has endeavoured to stir up strife by means of questions on the subject in the House of Commons. There appears to be some misconception as to the duties and powers of workhouse medical officers. The law on the point is explicit and plain. Subsection 5 of Section 1 of the Vaccination Act, 1898, expressly provides for the parents of children born in lying-in hospitals, infirmaries, or similar institutions, the same rights as regards exemption as apply to all other parents. This subsection was inserted when the bill was passing through Committee. It carries out a recommendation of the Royal Commission. The report (Par. 441) states that "in some workhouse infirmaries and lying-in hospitals it has been the practice to vaccinate children within a few days of their birth. Although under favourable conditions vaccination may be successfully carried out at that early age, we think the practice is to be deprecated unless there be at the same time obvious danger of small-pox contagion." The vaccination contract of the medical officer of a workhouse provides that, in the case of every child resident in the workhouse who has reached the age of *two* months without having been vaccinated the medical officer shall offer to vaccinate the child, and if his offer is accepted will thereupon vaccinate the child, unless the state of the health of the child necessitates postponement. There is nothing in the contract which in any way compels an acceptance of the offer, and it was pointed out in a correspondence which passed between the Local Government Board and Mr. Channing, M.P., that it was quite open to the parent to decline the offer, and that there is no intention to force it upon him. It is well known that the parents of children born in workhouses, and the children also, frequently leave the workhouse before the child attains the age of 4 months. For this reason it was thought desirable that the medical officer should offer to vaccinate children in the workhouse at an earlier age than 4 months, the age at which the public vaccinator offers to vaccinate children outside the workhouse; hence the provision in the contract under Art. 207 (5) of the General Consolidated Order for the offer to be made by the workhouse medical officer when the age of 2 months is reached. In the case of orphans or

deserted children, or those of whom the guardians have entire control, there can be no doubt that the guardians can order vaccination or revaccination. Apart altogether from the fact that medical officers should act entirely in accordance with the law, there are several important considerations tending to make it inadvisable to vaccinate children born in workhouses within a very short period from their birth. On November 13th we reported an answer given in the House of Commons by the President of the Local Government Board, in which the view taken by the Board was stated to be that the vaccination of a child in a workhouse before the age of 2 months was to be deprecated, unless there was at the time obvious danger of small-pox contagion, or unless the parent specially requested the operation. The antivaccinators appear to think that a considerable amount of compulsion takes place in workhouses, and that vaccination is extensively practised in these institutions without the consent of parents. They have failed to establish either of these allegations.

THE ROYAL SOCIETY.

THE report of the council presented to the anniversary meeting of the Royal Society on November 30th, in giving an account of the many subjects that have engaged attention during the past year, mentioned that the inquiry into the condition known as glass-workers' cataract, instituted at the request of the Government, had been pursued by the conference appointed by the society, but had been hindered by the refusal of certain glass manufacturers to allow their works to be visited. The investigation of the action of drugs upon trypanosomes had been continued under the direction of a subcommittee, and the inquiry into sleeping sickness in Uganda had been actively pursued by the Royal Society's Commission, under the direction of Colonel Sir David Bruce. Sir Archibald Geikie was re-elected treasurer, and Professor J. Rose Bradford one of the secretaries, and Dr. W. H. Gaskell and Dr. C. J. Martin were among those elected to the council. At the anniversary dinner held on the same evening, the President, in acknowledging the toast of "The Royal Society," proposed by Mr. Butcher, M.P. for the University of Cambridge, said that though the Royal Society was supposed to be a wealthy body, and had, in fact, a considerable sum of money to administer every year, the largest part of its revenue was derived from funds held in trust for certain ends, and not available for the general purposes of the society. The Fellows had not failed to give generous aid, but the growing demands of modern science were so heavy that the free income at the disposal of the society was sometimes barely sufficient, and some parts of the organization were crippled for want of funds. He referred to each recipient of the society's medals, and in mentioning that one of the medals had been assigned to Major Ronald Ross, said that his name was known all over the world for the importance of his researches into the life-history of malarial organisms, and for his success in pointing out the methods by which malaria might be combated. The President concluded by proposing the toasts of "The Medallists," to which Sir James Dewar and Major Ronald Ross responded.

THE APPOINTMENT OF REGISTRAR-GENERAL FOR IRELAND.

THE retirement from office of Sir Robert Matheson, the present Registrar-General for Ireland, took place on December 1st, in accordance with the civil service rule which fixes an age limit. The announcement that the position had been already filled by the Lord Lieutenant of Ireland was received with considerable surprise and not a little wonder by the medical profession in Dublin. The new Registrar-General is Sir William J. Thompson, Physician to the Lord Lieutenant, and senior physician to Jervis Street Hospital, Dublin. Sir William Thompson, beginning life in general practice, has worked himself into a distinguished position in his profession. He has taken a leading part in assisting Lady Aberdeen in her noble endeavour to wipe out tuberculosis in Ireland. He had become a consulting physician whose opinion was valued by many, and it is therefore considered all the more puzzling that he should have accepted the position of Registrar-General for Ireland, for which he has not had any opportunity of showing that he possesses any special fitness. The serious part, however, in connexion with the appointment is that the public services of another member of the medical profession, Dr. Ninian Falkiner, have not been recognized. On the death of the late Dr. T. W. Grimshaw, C.B., in January, 1900, the position which he had occupied as Registrar-General for Ireland was filled by the elevation of the Secretary, Mr. Robert Matheson, B.L., who was Dr. Grimshaw's immediate subordinate, and had received a legal training. At the same time a new appointment was made in connexion with the office—namely, that of Medical Superintendent of Statistics. Dr. Ninian Falkiner was given the position, which he has filled with the greatest credit for close upon ten years. No more industrious or conscientious public servant could be found than Dr. Falkiner. During his term of office he has introduced many useful changes designed to secure greater accuracy in the statistical medical records. It is to be regretted that for any reasons the services of an honourable and distinguished public servant should fail to be recognized by promotion to a position which he can in all fairness claim to have deserved. Furthermore, it is only within the past few months that a solicitor (who had no previous training in the office) was appointed to the post of Secretary to the Registrar-General, so that with a new Registrar-General and a new Secretary the only important official in the office who is familiar with the work is Dr. Ninian Falkiner.

SCOUTING QUINSEY.

THE objects with which the organization of the Boy Scouts has been established—to teach them self-reliance, self-control, and to train them to act with coolness and wisdom in an emergency—are so admirable that it seems churlish to find fault, but it is really a duty to call attention to the fact that the section of Sir Robert Baden-Powell's book on *Scouting for Boys*[1] dealing with first-aid, stands badly in need of revision. We have from time to time in books on popular medicine and surgery come across some extremely odd advice, but the oddest is certainly that which we find in this book under the head of "quinsey." Quinsey is apparently, in the first place, understood in its ordinary sense of tonsillitis, but is then, without any excuse, extended to conditions which can only be due to some acute disorder of the windpipe. We are told that if the swelling of the tonsils becomes so great that the patient cannot breathe, the throat becomes completely blocked up, and that there are then three courses open to the boy scout. One is to "Get a tube of some sort, such as that of a bicycle pump, or a pea-shooter, a pencil case with the end opened, etc., and push it into the throat, so as to keep

[1] London: C. Arthur Pearson, Limited. 1909. 1s.

a passage open for air to get into the lungs." If this advice be extensively carried out we can imagine that laryngologists will in the future have ample opportunity of gaining experience in the extraction of foreign bodies from the larynx or oesophagus, unless indeed the boy scout immediately proceeds to the third alternative, which is to cut a hole in "the neck in the hollow just above the hard breast-bone into the hard windpipe" with a penknife wrapped with rag, so that only the tip is exposed, and then to "push a tube into the hole thus made," in which case we expect that the whole business would end in a coroner's inquest. It is true that Sir Robert Baden-Powell adds that these methods are only a last resource if no doctor could be got, but a boy's imagination works quickly and boy scouts are trained to be prompt. There is other advice about first-aid which might be improved, but no other statements quite so strange as those to which we have referred occur.

THE INTERNATIONAL MEDICAL CONGRESS IN LONDON, 1913.

THE seventeenth International Congress of Medicine is, as has already been announced, to be held in London in 1913. The National Committee for Great Britain and Ireland, which made arrangements for the British members who attended the congress this year in Budapest, was formally dissolved at a meeting held in London last week under the chairmanship of Dr. Pavy, and immediately reconstituted as the General Committee to organize the meeting of the Congress in London. After Professor Osler had moved an instruction to the committee to see that the British Colonies were adequately represented, it was decided that the first meeting of the General Committee should be held in February next, and that Dr. Clive Riviere and Mr. D'Arcy Power, who were honorary secretaries of the National Committee, should act in the same capacity for the General Committee. The Permanent Committee appointed by the Congress at Budapest, consisting of the presidents, secretaries, and some members of the various international committees, of which Dr. Pavy is the president, will have its offices at The Hague. The honorary secretaries of the General Committee for the Congress of 1913 will be glad to receive the names of those who are interested in the Congress as soon as possible. Communications may be addressed to 10A, Chandos Street, Cavendish Square, London, W.

THE new hall and museum of the Royal College of Surgeons of Edinburgh will be opened by the Earl of Rosebery on December 15th; the President and Fellows will give a conversazione on the evening of that day.

WE have to record with deep regret the death, on November 29th, after a long illness, of Mr. R. Marcus Gunn, Senior Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and Ophthalmic Surgeon to the National Hospital for the Paralysed and Epileptic.

WE see it stated in the *Daily News* that Mr. A. J. Ram, K.C., a member of the Royal Commission on Vivisection, has been appointed Chairman of the Commission in the place of the late Viscount Selby. We do not know whether the Commission has finished its work, but it has had plenty of time to do so, and we are sure that every one interested in the matter would be glad to learn that there is a prospect of the publication of the report at a fairly early date.

Medical Notes in Parliament.

The Oaths Act, which became law last week, was considered for the last time in the House of Commons on November 24th, when the Lords' amendments were accepted without comment. These amendments provided that the witness should hold in his uplifted hand the New Testament, or, in the case of a Jew, the Old Testament, and to say or repeat the words of the oath. In the case of a person who is neither a Christian or a Jew the oath can be administered in any way that is now lawful. When this amendment was inserted in the House of Lords it was pointed out that the insertion of the words, "I swear by Almighty God that," etc., were a great improvement in the form of oath. It was suggested that the concluding words might be omitted, but after a discussion it was resolved to retain the words at the end, "So help me God." So passes, it may be hoped, the antiquated and insanitary form of kissing the book.

Vaccination.—Mr. Lupton asked the President of the Local Government Board whether he was aware that a healthy young woman named Rose Sandall, residing with her mother at 28, New Queen Street, Bedminster, Bristol, was constrained by her employers, Messrs. Mardon and Sons, of Bristol, to be vaccinated in February last; was he aware that the vaccination was not successful in the medical sense of the word, but resulted in the formation of proud flesh at the place of insertion, sores in the foot, and general illness and emaciation, disabling her from working; if he was aware that she had died, and that a *post-mortem* examination had revealed symptoms of cancer; and, since it was known that in some cases vaccination produced cancer, whether he would take steps to ensure full inquiry by persons in no way responsible for the production of the vaccine used in this case into the nature and origin of this vaccine. Mr. Burns replied that his attention had not been called to the circumstances referred to in the question. He was, however, now causing inquiry to be made into the matter. Mr. Lupton then asked for an impartial committee to inquire into the nature of the stuff now sent out as lymph, but received no reply.

Vaccination and Variolous Lymph.—Last week Mr. Lupton asked the President of the Local Government Board if he was aware that Dr. Monckton Copeman, Medical Inspector to the Local Government Board, at the meeting of the Public Vaccinators' Association held in Liverpool on October 29th, 1909, declared that the reason why vaccination was a really effective protection against small-pox was because it was really derived from that disease itself; and whether he would take steps to prevent the use of variolous lymph, having regard to Section 32 of the Vaccination Act, 1867, which prohibited the production in any person of the disease of small-pox by inoculation with variolous matter, or by the wilful exposure of that person not only to variolous matter, but to any matter, article, or thing impregnated with variolous matter. Mr. Burns replied that he understood that on the occasion referred to Dr. Monckton Copeman made a statement to the effect mentioned. Most of the lymph used in cases of primary vaccination in this country was supplied from the Government lymph establishment. That lymph was not variolous—that is, it was not obtained directly from human small-pox; it did not produce, nor was it used to produce, small-pox; and, as he had pointed out in reply to previous questions, persons using it did not come within Section 32 of the Vaccination Act, 1867. There was no reason to doubt that the same observations applied to other lymph in use in this country.

Death from Generalized Vaccinia.—Mr. Maddison asked the President of the Local Government Board whether his attention had been called to the death of Mona Stevenson, aged 2 months, of 14, Humphrey Street, Burnley; whether the cause of death was generalized vaccinia; whether an inquest or other inquiry was held, if so, with what result; at what age was the

child vaccinated; whether the operation was performed by the public vaccinator, with what lymph, and whence obtained; and what precautions or regulations, if any, he proposed to adopt or prescribe with a view to prevent similar untoward and fatal results of vaccination. Mr. Burns replied that his attention had not previously been called to this matter, but he was now making inquiry with regard to it.

Territorial Force (Vaccination).—Mr. John Ward asked the Secretary of State for War whether the exemption of the Territorial Force from compulsory vaccination had had any effects detrimental to the health of the men; and, if not, whether he would issue orders to respect the conscience in this matter of recruits to both branches of His Majesty's forces. Mr. Acland replied that no statistics were available at the War Office to enable him to reply to the first part of the question. As regards the second part of the question, there was no intention of waiving the regulations regarding vaccination in the regular forces.

Royal Army Medical Corps. — Lord Balcarres asked whether steps were being taken to ensure that officers of the Royal Army Medical Corps serving in Ireland should this year receive the full leave to which they were entitled by the regulations. Mr. Haldane said that under normal conditions it would now be possible to give every Royal Army Medical Corps officer serving in Ireland throughout the year full leave, provided that he was willing to take it when the exigencies of the Service permitted.

Territorial Force (Medical Officers).—Sir H. Craik asked the Secretary for War whether there was a senior Territorial medical officer in London suitable to take command of No. 1 London General Hospital. Mr. Haldane replied that this General Hospital was formed by the staff of St. Bartholomew's Hospital. The senior physician asked that Colonel Harrison, a distinguished medical officer who had been in the Grenadier Guards, should be appointed administrator, and he was accordingly gazetted on November 2nd.

Indian Medical Service.—Mr. Hazleton asked the Under Secretary for India what was the percentage of Indians amongst the officers of the Indian Medical Service; what was the total cost for the upkeep of this service; what was the charge on the Indian Treasury for recruiting the higher grades of the medical service of India in this country, and sending the successful candidates to India; what was the number of officers who were on leave every year, and the cost of the extra number taken into the service during their absence owing to Indian assistant surgeons not being allowed to take their places; and when he proposed to open the higher grades to qualified and capable Indians. The Master of Elibank replied that the percentage of Indians—that is, pure Asiatics—among the officers of the Indian Medical Service was rather more than five. The total cost of the officers of this service on the active list, including both those in military and in civil employ, was approximately £570,500 a year. The charge for recruiting those officers, both European and Asiatic (both being recruited in England) was about £12,260 a year, which included the pay of the officers while under training in England. The average number on leave might be taken as 123. The vacancies so arising were filled from the establishment, and not by extra appointments. The higher grades were already open to qualified and capable Indians.

Hemel Hempstead Union (Death of Patient).—Mr. Talbot asked the President of the Local Government Board whether his attention had been called to the recent death of a patient in the infirmary of the Hemel Hempstead Union, which formed the subject of an inquiry before the coroner; whether he proposed to take any action with regard to the management of that workhouse, especially as regards the treatment of the sick poor; and whether he could hold out any expectation of the issue of a general order to ensure the appointment of trained nurses in all workhouse infirmaries. Mr. Burns answered that his attention had been called to the case referred to. He deeply regretted the occurrence, and he had fully informed himself with regard to the circumstances connected with it. He was giving consideration to the management of the sick wards of the workhouse in question, and he was in communication with the guardians on the subject. With regard to the last part of the question, he might point out that, under the Orders at present in force, provision was made for the appointment of one or more nurses of experience in every workhouse.

Malta Fever and Goat's Milk.—Mr. Lupton asked the Secretary for War whether sanitary improvements, in the way of drainage and cleansing of the harbour, had been effected in Malta; if a large portion of the garrison had been removed from the low-lying barracks at St. Elmo to new barracks on the hill; if the cases of fever in the garrison had been reduced to a small proportion of their former number; if he would now remove the prohibition of the use of goat's milk by the garrison, it having been conclusively proved by Dr. Walter Hadwen that there was no connexion between goat's milk and fever; and if, considering that the production of goat's milk was the chief farming industry of the island, he would remove a prohibition which was the cause of so much loss to the islanders. Mr. Haldane said that during recent years improvements had been steadily carried out in relation to the drainage of the harbours in Malta. In 1906 a considerable number of the troops were transferred from St. Elmo to the new barracks. The Mediterranean Fever Commission, however, obtained no evidence connecting the condition of the harbours with the prevalence of Mediterranean fever amongst the troops. Since the prohibition of the use of goat's milk in barracks and hospitals Mediterranean fever had practically disappeared from amongst the troops. The evidence given in the reports of the Royal Society's Mediterranean Fever Commission connecting goat's milk and Mediterranean fever was so strong, and the improvement in the health of the troops since the use of goat's milk had been given up was so marked, that no responsible Minister who did not wish to be regarded as weak and incompetent would venture to remove the prohibition of the use of goat's milk by the garrison.

Meat Inspection.—Mr. Bowerman asked the President of the Local Government Board if he could state the standard of inspection of meat adopted by the various municipalities throughout the country; the nature of the qualifications held by inspectors of meat, and the number of carcasses confiscated for disease during the three years ending December 31st, 1908. Mr. Burns answered that the inspectors appointed by sanitary authorities were empowered by the Public Health Acts to seize meat which was diseased, unsound, unwholesome, or unfit for human consumption. There was no general code of instructions in regard to meat inspection, but the Local Government Board had from time to time urged on local authorities the importance of uniform and efficient inspection. The inspectors referred to held various qualifications. A considerable and increasing number of them possessed the certificate granted by the Royal Sanitary Institute after examination in meat inspection, and this subject also formed part of the requirements of the Sanitary Inspectors' Examination Board, which sanitary inspectors in London were required to satisfy. In some of the largest towns meat inspection was undertaken or superintended by officers with veterinary qualifications. He had no information as to the number of carcasses seized by inspectors of the sanitary authorities in the period referred to in the last part of the question.

The House of Commons met again on Wednesday last, and adjourned immediately after questions till Thursday, when the Prime Minister's resolution in answer to the action of the House of Lords in declining to pass the Finance Bill will be debated. It is expected that the proceedings on the resolution will be finished on Thursday night, and that on Friday Parliament will be prorogued till an early date in January.

England and Wales.

[From Our Special Correspondents.]

LONDON.

The Medical Treatment of School Children.

The question of the provision of medical treatment for London school children was advanced another stage on November 30th, when the London County Council accepted the proposals of the Education Committee reported in the British Medical Journal, November 6th, p. 1374.

The committee asked the Council (*a*) to approve arrangements with eight hospitals for the treatment of 16,000 children, and (*b*) the acceptance of the offer of the Committee of the Charing Cross Hospital to provide *x*-ray treatment of ringworm for twenty-five children, the Council to contribute £35 in respect of the cost of apparatus. The committee reported, without comment, the receipt of the resolution passed by the British Medical Association at Belfast declaring the proposed arrangements to be unsound in principle and unjust to the medical profession.

The following amendments had been put on the paper:

By Mr. Bray: That the waiting room and other accommodation is to be satisfactory to the Council, and that the hours of treatment such as to be convenient to working-class parents.

By the Rev. Stewart Headlam: That in view of the great distances many thousands of children, especially from South London, will be required to travel to the hospitals, the great loss of time which the poorest parents will suffer in the long waiting in the out-patients' departments, and the difficulty of ensuring adequate treatment in such departments owing to the thousands of other patients awaiting attention, the Council directs the Education Committee to prepare a definite scheme for the establishment of school clinics, so that the children can be treated in their own localities.

At the suggestion of the Chairman the debate took place on the whole question, the amendments being moved subsequently without discussion. The debate lasted for three hours.

Mr. Cyril Jackson, Chairman of the Committee, summarized the history of the proceedings of the Council with regard to the medical treatment of school children,[1] and claimed that it was evident from the report now before the Council that it was possible to deal with all cases needing treatment in existing institutions. ("Hear, hear," and "No, no.") The number of hospitals with whom arrangements were now being completed was twelve (including four institutions whose offers were accepted in July), and he hoped at a later date to submit the offers of other important hospitals. Treatment was to be given at two centres in Hampstead. The system of using the hospitals was capable of almost indefinite expansion—for instance, Moorfields Eye Hospital, where 3,000 cases were arranged for, had offered to take 12,000 cases. It was suggested that in certain parts of London there might be difficulties; it was true there were more hospitals in North than in South London, and in one or two places—notably Woolwich and Norwood—the committee had not been quite successful. There, however, they were communicating with the local practitioners, and hoped soon to submit arrangements with them. The Council owed a great deal to the education officer (Mr. Blair) for his work in carrying on the negotiations with hospitals. The treaties with the various institutions had not been easy, owing to much misunderstanding which had crept into the minds of the medical profession as to what the Council intended. Now that the proposals were becoming understood more and more hospitals were coming forward. Certain hospitals had applied and had been refused by the committee, because there were not sufficient children to send to them. The assistance of those hospitals might be required later, but he did not think so. In conclusion Mr. Jackson declared his confidence that the treatment of London school children would be adequately dealt with in the way suggested. He was glad that it was so, for he was certain that the best plan was to place the children under the magnificent existing hospitals with their skilled staffs. It would be impossible to obtain anything like the same quality of men in smaller institutions.

Mr. Bray led the opposition to the committee's proposals. He regretted a serious omission in the scheme to which the chairman had not referred—the fact that dental cases were not to be treated. Only last week the Education Committee decided to postpone for a further six months the consideration of this part of medical treatment. The army and navy authorities had urged them to do something for the children's teeth so that they could get recruits, and medical men told them many diseases originated from septic teeth. The Council could set up twelve clinics in convenient situations and treat every year 131,000 children for £20,000, or establish twenty-four clinics for £26,000. They had it on the authority of the Council's medical officer—Dr. Kerr—that the cost would be 4s. a head.

Mr. Jackson: That is not correct.

Mr. Bray challenged the Chairman of the Committee to circulate the report of the medical officer to which he referred. The Council was going to pay the hospitals on an average 5s. a head, but he doubted if it would get value for the extra money. The agreements to be entered into with the hospitals provided that the hours of attendance must be convenient to the hospital; the assistants were to be appointed by the hospitals without consulting the Council, which would pay; the Council would have no representation on the hospital boards, and bound itself not to interfere with the work of the institutions. Had the out-patient departments of the great hospitals been famous for their efficiency? Out-patients in hospitals were treated in a way which would not be tolerated if the service was on other than a voluntary basis, and the children of London were to be handed over to them. Efficient treatment could not result. It might be said that the scheme would effect a saving as compared with clinics, because some of the hospitals would treat free. But was it likely that they would continue to do so when they could get help from the rates with a promise that the Council would not interfere in any way? Already the London Hospital, which originally offered free treatment, had asked for grants. The Education Committee calculated that many children would go to the hospitals without being sent by the Council. If clinics were established this might occur and result in a saving to the rates; but did anybody imagine that any hospital would allow two classes of children to attend—one class for whom they received 5s. a head and the other for whom they received nothing? Under the proposed scheme the Council would have to pay for the maximum number of cases and pay 25 per cent. more than the amount for which its own adviser said it could do the work itself. Further, the hospitals were not conveniently situated, and in some districts it would cost 1s. 6d. for the parent to take a child three times to the nearest hospital. In necessitous cases the Council would have to pay this money, and in all cases where the cost of treatment was sought to be recovered, allowance would have to be made as between people who lived at the doors of a hospital and those who lived in remote suburbs.

Mr. Jay declined to take seriously the figures quoted by Mr. Bray, and asserted that the Council had no reliable estimate of the cost of clinics. In his view there was little difference in the cost of the two methods of treatment. Under the proposed arrangements the hospitals would know exactly how many children to expect, and would make preparation accordingly. No doubt the cost to the parents of taking their children to the hospitals would be considered when the cost was sought to be recovered, and in some cases the Council would pay travelling expenses.

Mr. Jephson welcomed the proposals, though he did not think they were sufficient. He believed a system

[1] British Medical Journal, December 26th, 1908, p. 1869 April 3rd, 1909, p. 857: April 10th, p. 914; and July 17th, p. 155.

involving the use partly of hospitals and partly of clinics would be required, and that neither alone would solve the problem. By omitting treatment of teeth the Council had failed at present to deal with the most important part of medical treatment.

Mr. Cohen paid a tribute to the capacity of the management of the London hospitals, and expressed the opinion that clinics would be more expensive than had been suggested.

The Rev. Stewart Headlam, turning aside from the question of mere financial expediency, made a speech which obviously surprised the Council, in the course of which he said he wished he could kindle the Christian imagination of Mr. Buxton (the Chairman of the Estimate Committee) and get him to go back to the Gospels and remember that the work of the Gospels was against disease, and for health. The Divine orders were that we were to do the same work as Christ did. If the Finance Committee would only set themselves to imagine what would be the result to London in one generation if the children's ailments were attended to they would be eager and enthusiastic to spend whatever money was necessary to make the rising generation healthy. To this great Council had been entrusted the duty of helping to this extent to bring about the kingdom of heaven upon earth. Mr. Headlam reminded the Council that, in dealing with medical treatment on the present lines, it was disregarding the report of its own Special Committee, consisting of medical men and other experts and the Council's representatives. It was a committee whose constitution was entirely in the hands of the majority on the Council, and yet it reported in favour of clinics. So eminent an authority as Sir Victor Horsley had vigorously maintained clinics against hospitals; the British Medical Association had done the same, and so had the *Times* newspaper. Even the Council admitted that clinics would have to be established where the hospitals were not available.

The Rev. Dr. Scott Lidgett was somewhat sceptical as to the suggestion that the negotiations with the hospitals had been delicate and difficult. The hospitals had got just what they wanted, and the Council on its side had made no conditions. He joined with Mr. Cohen in admiration of the work of the hospitals and in his desire to secure co-operation between voluntary and public bodies. Indeed, he believed that as time went on they would be brought into closer relations. But there should be give and take on both sides. He feared that the Council was entering into unsuitable arrangements which, as more and more disease was brought to light, would break down utterly. Many of the hospitals stipulated that they would only deal with a wholly inadequate number of cases. Whole districts were left untouched by this scheme, and considerable hardship would be imposed on parents who would have to take their children long distances for treatment. He did not want to speak lightly of the out-patient departments of the hospitals, but in them young and inexperienced men would see the children. The Council could make its own arrangements at certainly no greater cost than under the proposed scheme, and call to its service higher medical skill than the children would receive in the hospitals. (Cries of "Oh!") Did members suppose that Sir Victor Horsley, Sir Thomas Barlow, and other distinguished heads of the profession would be at the disposal of the children? While general instruction was given by these authorities, the bulk of the work would be carried out by those who had the minimum qualification for operating on their fellow creatures.

Mr. Ernest Gray declared that any party on the Council which declared for clinics and the treatment of all the children's ailments would suffer defeat at the polls. Clinics would have to be staffed by young practitioners at low salaries to render them as cheap as the hospitals.

Mr. Jackson, replying on the debate, urged that the hospitals might be trusted to make adequate arrangements for treatment, and quoted in support a letter from the Royal London Ophthalmic Hospital, which stated that a new refraction department was being established in which the children would be treated separately from the other patients, and that arrangements were being made to render the children's visits as short as possible. He also claimed that the provision already submitted to the Council represented more than the twelve clinics Mr. Headlam thought to be necessary, whilst Mr. Bray's suggestion of two dozen clinics could easily be surpassed. As to the cost of clinics, it was difficult to obtain information, but the education officer, who had made inquiries at Cambridge, was told there that the cost was 7s. 2d. per head, and that the proportion of children suffering from decayed teeth was 76 per cent. The committee was inquiring into the subject of the treatment of teeth, but felt that at present the Council should limit itself to dealing with ailments more directly the result of school work.

On a division, Mr. Bray's amendment was rejected by 44 votes to 20, and Mr. Headlam's by 53 votes to 34. Dr. Beaton moved a further amendment instructing the committee to report forthwith as to providing dental treatment, but this was also lost, and the recommendations of the committee were then approved.

MUNICIPAL EPILEPTIC COLONY.

The London County Council on November 30th considered a report by the Asylums Committee on the administration of the epileptic colony at Epsom and a proposal to add to the buildings at an estimated cost of £12,760. The committee stated that the colony, which was opened in 1903, at present accommodated 273 male and 60 female patients, who were all epileptics but also certified lunatics, the colony being a county asylum, established under the Lunacy Act of 1890. All the colonists, however, were selected with a view to their physical fitness to share in the labour (chiefly agricultural) carried on as part of the treatment. It was also considered whether the applicant for admission was capable of being trusted with a measure of personal liberty within the colony grounds to an extent not possible in an ordinary asylum. This liberty was a valued privilege at the colony. Originally the patients were always selected from those who had been admitted in the first instance to some other asylum, but recently patients stated to be epileptic in the application for admission, had been sent directly to the colony, and had been kept there for a time to ascertain whether they were fit for the special conditions of colony life. This practice, however, had only been possible to a limited extent, because of the lack of proper reception accommodation at the colony. If the main features of the institution as a working colony were to be retained, the committee was satisfied that provision must now be made for the reception of all acute recent male epileptic patients, from amongst whom suitable workers could be selected for retention, unsuitable cases being drafted elsewhere. For this purpose a suitable admission villa must be built to accommodate 50 patients, and this extension on the male side would necessitate an increase in the number of chronic female epileptic workers (at present only 60), in order that the increased domestic and laundry work might be coped with. Fifteen additional attendants would also be required, involving an extension of the staff block.

The committee recommended the provision of a central bathroom, on the ground that it would allow the head attendant or other responsible senior officer always to be present when bathing was going on. This was a matter of much importance, as by this means bruises would be observed, and a check placed on any possible ill-treatment of patients. At present the supervision was difficult because bathing took place simultaneously at each villa. It was proposed to instal spray baths instead of slipper baths in order to bring about economy in the cost of coal. The total cost, which worked out at £151 a bed for 188 additional patients, has been accepted by the Finance Committee as reasonable.

The recommendations of the Committee were approved.

BIRMINGHAM.

Dinner of the Medical School.

The annual dinner of the Medical School of the University of Birmingham was held at the Grand Hotel on November 25th. The president was Professor J. T. J. Morrison, and the company numbered nearly one hundred. After the toast of "The King" had been duly honoured that of "The Medical School" was proposed by Mr. Charters J. Symonds, senior surgeon to Guy's Hospital, and was responded to by Professor Gilbert Barling, Dean of the Medical Faculty, and by Professor Jordan Lloyd, Professor of Surgery. Professor Barling spoke about the changes which had occurred in the staff of the medical school, during the past year, lamenting the death by accident of Professor Arthur Foxwell, and the loss of Professor Arthur Robinson and Dr. Miller by their appointment to posts in other universities. The toast of "The Guests" was proposed by Dr. Kauffmann, senior physician to the Queen's Hospital, and responded to by Sir James Barr and Professor Peter Thompson, the newly appointed Professor of Anatomy at the University. Between the toasts pianoforte solos were given by Dr. B. A. Lloyd, and songs by Dr. Walsh and Dr. Aitken. The dinner was one of the most enjoyable that has been held. The honorary secretaries, Messrs. S. W. Assinder and C. E. Sult, are to be congratulated upon the excellent results of their efforts, which entailed the expenditure of a considerable amount of time and energy.

Royal Army Medical Corps, Territorial Force.

The Birmingham Units of the Royal Army Medical Corps, Territorial Force, under the command of Colonel W. P. Whitcombe, A.M.O., South Midland Division, held a church parade at the Cathedral Church, Birmingham, on November 28th. Over 300 men attended, and fell in at the General Hospital, where they were inspected by Brigadier-General Raitt, C.B., commanding the South Midland Division. The Right Hon. the Lord Mayor of Birmingham attended the service. The units present were 1st South Midland Mounted Field Ambulance, commanded by Major W. H. Stephen, M.B.; 1st South Midland Field Ambulance, commanded by Major C. H. Howkins; 2nd South Midland Field Ambulance, commanded by Lieutenant-Colonel C. T. Griffiths; and 1st Southern General Hospital, commanded by Major J. E. H. Sawyer, M.D. After the service the units marched to the head quarters of the 5th and 6th Battalions of the Royal Warwickshire Regiment, where the parade was dismissed.

WEST YORKSHIRE.

The School Medical Officer as Certifying Factory Surgeon.

A clause in a bill promoted by the Bradford Corporation last year seeking to legalize the appointment of the school medical officer as a certifying factory surgeon was strongly objected to by the medical profession in the district. The bill was defeated at a town meeting, and was, therefore, not proceeded with. This year it was revived with the same clause. The Executive Committee of the Bradford Division of the British Medical Association forwarded a protest against the clause to the City Council, and, after a somewhat acrimonious discussion at a meeting held on November 15th, it was withdrawn, as it had not received the necessary number of votes. It is satisfactory that this project has been nipped in the bud. To any one who knows how laudably the certifying surgeons have carried out their duties—often under difficult circumstances—the contention raised in the City Council that the medical examination was of the most cursory description, and frequently a "bogus" examination, must seem manifestly absurd.

Barbers and Tinea Sycosis.

An interesting case in regard to liability for the contraction of sycosis was raised in the Huddersfield County Court on November 19th. The plaintiff's case was that on Good Friday he was shaved by the defendant, and on the following day a rash appeared on his right cheek. He received medical attendance for a long period, and the condition was diagnosed as barber's rash. His contention was that the utensils used by the defendant, or the towel with which his face was dried, were the sources from which his infection proceeded. The medical evidence was conflicting, two doctors maintaining that the condition was tinea sycosis, and three others that it was a simple sycosis not due to infection by the tinea. The judge held that it was not proved that the plaintiff had contracted the disease at the defendant's shop, for whom he consequently gave judgement with costs.

The Diminishing Birth-rate.

At a recent meeting of the Ripon Diocesan Conference, the Bishop of Ripon dealt again with the diminishing birth-rate. It was, he said, the stronger, the sturdier, the better men who refused to have families. The dwindling population of England meant that we would become less and less a Power of first rank in the world. Those who were increasing the most rapidly were not those who were profitable as citizens. The unfit and the diseased were increasing rapidly, while the best classes were not increasing. If a man, from physical or moral deficiency, was not likely to be a useful father of a family, it was, he said, far better that he should not be so. Most medical men will agree that the feeding, clothing, and medical treatment of children physically unfit, although of great advantage to the individuals, only perpetuates the evil, and some will go so far as to maintain that as the State is taking over the responsibility for these physical weaklings, a time is coming when the natural corollary to this humanitarian treatment will have to be seriously considered—ante-nuptial medical examination. If the infant from birth is to be looked after by the State, it naturally follows that the State, it is argued, is responsible that its conception should take place under the most favourable circumstances, and that, though the weaklings existing must be looked after, if they are reared by the State to maturity it should not allow them to marry unless their physical condition is such as to render it likely that their progeny will have at least an average hope of a healthy and useful life.

MANCHESTER AND DISTRICT.

District Nurses and Medical Men.

In an address on district nursing before the Manchester Fabian Society, Dr. F. S. Fletcher, Honorary Medical Officer to the Bradford District Nurses' Home, Manchester, said that there were about sixty nurses connected with the various nursing homes in the Manchester district, and that ten of these were attached to the Bradford home. The nurses were required to undergo three years' training after the age of 23; in order to obtain the Queen Alexandra medal a further six months' training was needed in a recognized home, during which time six reports as to health and character were made. At the end of that time they had to sit for an examination, and, if successful, were required to sign a contract for a further three years' nursing. Any doctor who thought his patient could not afford to pay for a nurse was at liberty to apply to the nearest home, and a nurse was sent at once free of charge. Dr. Fletcher showed that the nurses relieved the doctor of much of the rougher work, and then made the surprising statement that he had estimated that the nurses reduced the number of visits the doctor would otherwise have to make from twenty to about five, which meant a great financial saving to the patients. It is not easy to see how such an estimate can be made, even approximately, and Dr. Fletcher can hardly have perceived the full import of his remark. If the nurse is not altogether as good as the doctor, then the doctor is open to the charge of substituting inferior services for his own, in order to save himself trouble. While if the nurse is as good as

the doctor for fifteen out of twenty visits, then boards of guardians and the public generally will very soon grasp at the idea. In the case of district medical officers the guardians will be apt to ask, Why should they pay three doctors if one doctor and one or two nurses are quite as good; or why should they pay a proper salary to a doctor for the best attention he can give, if he pushes off some of the work on to a nurse? In the case of private practitioners the suggestion will seriously aggravate the trouble that is occurring in some parts of the country, happily not in connexion with the Manchester and Salford Sick Poor Nurses' Association. Cases are not unknown where nursing associations are sending out nurses to patients on whom no medical man is in attendance, on the plea that the nurses can quite well manage simple cases of illness, giving simple remedies and only sending for a doctor when required, which often means when there is fear that a death certificate may be required. Of course, Dr. Fletcher would not sanction such proceedings, but his suggestion, which has had wide publicity in the press, that the district nurses "reduced the number of visits a doctor would otherwise have to pay from twenty to about five," has been interpreted as meaning, what probably was never intended, that a doctor could quite well substitute a nurse for himself in three out of every four visits.

THE HOSPITAL FOR INCURABLES.

The report presented to the annual meeting of the Hospital for Incurables, over which the Lord Mayor of Manchester presided, stated that there were 120 patients in the homes at present—71 men and women at the Mauldeth Home and 49 women at Walmersley, near Bury. In addition there were 12 pensioners, and 2 elected candidates were receiving grants until there was room for them in the home. At the present time 20 patients had been found on thorough investigation to be suitable for admission, but from want of accommodation only 9 were to be received. The annual income from all sources amounted to £5,892 and the expenditure had been £6,702, showing a deficiency of over £900, the annual subscriptions having been lower during the last year than for any time during the past twenty-six years.

LANCASHIRE.

THE ROCHDALE MILK SUPPLY.

ONE of the first questions to engage the attention of Dr. A. G. Anderson after his appointment as medical officer of health for the county borough of Rochdale appears to have been the conditions under which the milk trade of the town is conducted. As the result of investigations which he has made he has recently presented to the Health Committee a very exhaustive report, in which he deals at some length with the local circumstances, and also touches upon wider and more general aspects, such as the relation which a milk supply bears to health and disease, the significance of dirt in milk, and the nature and source of bacteria which are to be found in it; while a short account is given of the powers possessed by sanitary authorities with respect to the control of milk supplies in this country.

It is a matter of some surprise to find that in a town of the industrial character of Rochdale, with a population approaching 100,000, and covering an area of only a little over 4,000 acres, there should be as many as 75 dairy farms containing over 1,200 cows. Very elaborate details are given in the report of each of the 137 cowsheds on these farms, and 30 are classified as good, 39 as fair, and 68 as bad. The conditions of those described as bad include lack of means for ventilation and for lighting, floor of soft bricks with no channel for draining, overcrowding, no water supply near, a dung pit almost adjoining the shed, and the building constructed entirely of wood with the inside walls roughened.

Among the suggestions made by Dr. Anderson is the establishment by the Corporation of a "model" dairy farm in connexion with a milk dépôt for the sale of milk specially prepared for infants. He considers that such a farm would not only supply children with pure milk, but it would educate public opinion, and, more important still, it would be "an inspiration and stimulus to many farmers and dairymen, who may care to learn the science of their business; while, as a corollary, it would follow that those who will not learn must gradually succumb for lack of customers."

WALES.

THE PRESIDENT OF THE SOUTH WALES MINERS' FEDERATION ON THE BRITISH MEDICAL ASSOCIATION.

THOSE members of the British Medical Association, and of the profession outside the Association, who are in the habit of bewailing or denouncing, according to their temperament, the ineffectiveness of the Association for the maintenance of the interests of the profession may perhaps take some comfort from the following report, appearing in the *Western Mail* (Cardiff) of November 30th, of proceedings at a district meeting of the South Wales Miners' Federation:

The doctors' question was again under consideration for some time, a resolution being moved that, "In consequence of the unsatisfactory state of the present doctors' system, we desire the district to take steps with the object of carrying into effect the result of the ballot that was taken some time ago; failing this course, that the matter be raised and decided upon when the next general agreement is made." It was explained that in some places an agreement had been come to between the doctor and the workmen, whereunder the former, in cases of dispute, would be subject to six, or even three, months' notice.

Mr. W. Abraham remarked that the Medical Association was was "one of the most powerful organizations in the land, and one of the most autocratic in existence anywhere," and he was afraid that the Legislature would have to intervene before the question could be effectively dealt with. In practice the Medical Association indeed were "almighty," and seemed to have every part of the country in its own hands. He agreed with the suggestion that the matter should be dealt with in a general way in the new agreement, and that an understanding should be come to as between the Mining Association and the Miners' Federation, so that the employers and the workmen might be brought into agreement in the matter. He was afraid that no finality could soon be effected, though an arrangement might be arrived at whereby the workmen could secure the co-operation of the employers.

The resolution was ultimately carried.

The receipts for the day totalled £1,673 4s. 3d.

The suggestion, in the first part of this report, of a reorganization of the system of employment of colliery surgeons in the district in question will no doubt receive the due consideration of the North Glamorgan Division and South Wales Branch and of the profession generally in that district.

We are more immediately concerned with the speech reported to have been made by Mr. Abraham, M.P., as a testimony to the value of the work of the Association for the medical profession, and as evidence of the peculiar attitude of some trade union leaders towards medical organization. It must be gratifying to the South Wales Branch and to the Central Council and the Medico-Political Committee of the Association that their combined efforts during the past five or six years with reference to colliery disputes in the South Wales area have created in the mind of so shrewd an observer as Mabon such a lively impression of the efficiency of the Association for protecting the profession in such matters. Concurrently we must express amazement that, apparently, it has not crossed the mind of this veteran trade-union leader that the conditions of employment of doctors would afford suitable matter for direct negotiations with the British Medical Association. He thinks of conference between the Mining Association and the Miners' Federation; he thinks of legislation; he thinks of anything except conference with the representative Association of the medical profession.

We can, perhaps, faintly imagine what view the Miners' Federation would take of any attempt by coal-owners and landed proprietors in South Wales or elsewhere to settle any question affecting the employment of miners by negotiations between themselves, and by application to Parliament, without any attempt to consult the Miners' Federation. Could he not realize that this would be a parallel instance to his proposal that questions of employment of colliery surgeons should be settled by negotiations between their

employers, whether miners or coal owners, and application to Parliament without any attempt to negotiate with the British Medical Association?

While glad to accept, so far as modesty will permit, the tribute of Mr. Abraham to the power of the Association, we take leave to deprecate his reference to its "autocracy." Such an epithet is entirely out of place in reference to a body which has always shown itself so ready for amicable negotiations, as a means of adjustment of disputes, as the British Medical Association. If the miners in South Wales had shown less disposition to hold the Association at arm's length they might not suffer from such misapprehensions and sense of difficulty as are exhibited in the speech before us.

Ireland.

[From Our Special Correspondents.]

The Tuberculosis Prevention Act.

A memorandum, issued by the Local Government Board of Ireland, on the objects of the Tuberculosis Prevention (Ireland) Act, 1908* is a very lucid and useful explanation of the intentions of the framers of the Act, and the means by which these intentions are to be attained.

It is evident that whilst seeking to safeguard the community against risks caused by ignorance on the part of those affected with consumption, the utmost consideration has been given to the personal interests of the unfortunate sufferers. Though it is held that notification of all cases of the disease is desirable and necessary as a preliminary to any definite prophylactic action by a sanitary authority, the Act only requires that cases of "open" tuberculosis, that is, cases in which it can be demonstrated that infective matter is being given off by the affected individual, shall be subject to notification. Even such cases need not be notified unless the individual is housed or working under conditions which are dangerous to others. The conditions of danger are thus defined—that the person suffering (1) habitually sleeps or works in the same room as any other person not so suffering; or (2) is employed or engaged in handling, preparing, or distributing milk, meat, or any other article of human food intended for sale to the public. Further, even when these conditions are present, the physician in attendance may, when he desires to take the full responsibility of seeing that precautionary measures are carried out, request the medical officer of health not to intervene or direct an inspection by the officers of the sanitary authority. These provisos have been subjected to some criticism, and the memorandum explains that it is hoped by these means to spare patients any unnecessary intrusion. It is also directed that in all cases care must be taken to safeguard the sufferers from unnecessary publicity, and secrecy is to be enjoined on all officers who may have custody of the forms of notification or knowledge of their contents. The spirit of the memorandum explaining how the Act is to be carried out is that notification is to be made the means of aiding the sufferer, and those who live with him, by advice and instruction so to live that he may give himself the best chance of recovery, and those who associate with him the greatest protection from contracting the disease. This spirit is evidenced in the directions contained in the memorandum explaining its objects. We could wish, however, that such a necessary, and at the same time considerate, Act could have been made obligatory instead of permissive, since there is always the possibility that a sanitary authority of a district where such an Act is most required may fail to seek permission to put it into force. Good as the Act is, its success must depend largely upon the way in which its provisions are carried out, and it is much to be hoped that all who have to carry out the Act will carefully read this memorandum and imbibe the spirit which has prompted its wording.

* London: Wyman and Sons; Edinburgh: Oliver and Boyd; Dublin: E. Ponsonby. Price 2d.

University College, Cork.

A correspondent writes: It is most interesting to record that the number of entries for this session at University College, Cork, are 200 per cent. greater than the average for the past fifteen years, and the numbers are likely to increase still more in the course of the next few years. This influx has taken place mainly into the Arts side of the college; the medical entry, always a most successful school in Cork, maintains its numbers as usual. The engineering school took first place in Ireland this past year, so that the future outlook of the old Queen's College, Cork, is a distinctly bright one. At present the Academic Council is busy rearranging the courses of studies for the different faculties, which have to be submitted to the Senate of the National University. As this latter body is composed of an overwhelming majority of Dublin representatives, it is necessary that the different faculties should be on the watch that their decisions as to the arrangements of the courses for Cork are not upset; consequently many pilgrimages have to be made to Dublin for the present, and altogether the President and the professors are having an extremely busy time. The one depressing feature of the Cork college is the totally inadequate sums granted for building purposes. £14,000 is all that is allotted for that purpose, almost the whole of which will be necessary for the new chemical laboratory. Belfast got £60,000 for building purposes alone, and only a few years ago Government presented Belfast with a new chemical laboratory. It is most essential that Belfast should get £60,000, as no doubt every penny of it was needed, but Cork could have utilized a like amount, and feels crippled with its small grant. Indeed, so much has it felt the inadequacy of the building grant, that the City University Committee, as well as the governing body of the college, passed resolutions requesting the Irish Parliamentary Party to bring before Parliament the necessity for increasing the amount. Mr. Birrell, however, at present refuses to listen to any further increase for either Cork or Galway, the latter centre being even still more meagrely dealt with.

Irish Association of Medical Women.

At the recent annual meeting of the Irish Association of Registered Medical Women, Dr. Katherine Maguire, President, in the chair, it was decided to enlarge the scope of the operations of the society by establishing an information bureau.

Scotland.

[From Our Special Correspondents.]

Quincentenary of St. Andrews University.

The first meeting of the General Committee charged with the arrangements for a fitting celebration of the five hundredth anniversary of St. Andrews University was held on November 27th, when officials and subcommittees were appointed. It was resolved that the President should be the Chancellor, Lord Balfour of Burleigh; that there should be as Vice-Presidents the Vice-Chancellor, Sir James Donaldson; the Lord Rector, Lord Avebury; the former Lord Rectors—the Right Hon. A. J. Balfour, Lord Reay, the Right Hon. James Stuart, M.P., and Mr. Andrew Carnegie of Skibo, as well as a large number of other gentlemen.

The meeting then took into consideration the date of the celebration, and, on the motion of Professor Herkless, it was agreed that it should take place in September, 1911, in view of the fact that Bishop Wardlaw had recognized the existence of a University of St. Andrews in 1411.

The question of a permanent memorial of the celebration was then considered. Mr. Gibson, President S.R.C., expressed the view that this should take the form of a new Students' Union. On the motion of the Chairman, Vice-Chancellor Principal Sir James Donaldson, it was resolved to refer this, and all other proposals on the point, to the Conveners' Committee.

Special Correspondence.

PARIS.

M. Metchnikoff on Infantile Diarrhoea.—The Points of Election of Tetanus Toxin—A Woman Externe.—Death of Dr. Jean Binot, of the Pasteur Institute.

AT the last meeting of the Académie de Médecine M. Metchnikoff related the nature and results of his researches on infantile diarrhoea, which he was led to study in the course of his researches on the part played by intestinal microbes in premature old age. During the first ten months of the present year there had died in Paris from diarrhoea and enteritis no less than 1,210 infants under 1 year, 229 being breast-fed; the total was lower than the average, as the summer was cool. Infantile diarrhoea had been variously ascribed to the *coli* bacillus, streptococci, *Bacillus pyocyaneus*, *proteus*, and others, and many investigators had declared that the majority of cases were not of bacterial origin at all, but were due to food intoxications, or even to sunstroke. M. Metchnikoff had hoped to make experiments on young monkeys at the breast, but had not yet been able to obtain any; the best results he had obtained were with quite young chimpanzees.

1. The smallest chimpanzee, weight 3 kilog., fed on bananas, and in good health, swallowed a small quantity of the green stools of a girl, aged 6 months, suffering from acute gastro-enteritis. The following day the chimpanzee began to suffer from a very watery diarrhoea which lasted nearly four weeks; the stools were of the same character as in the child, and showed abundant polynuclear leucocytes. Both the child and the animal recovered.

2. A second young chimpanzee, weight 4 kilog. 800 grams, swallowed a small quantity of faecal matter of the first chimpanzee. On the following day diarrhoea appeared, which lasted for ten days.

3. Two other older chimpanzees, one smaller than the other, were given a small quantity of faecal matter from the same infant. Next day the smaller chimpanzee developed diarrhoea, which lasted eight days. The fourth chimpanzee remained normal for ten days, and then had diarhoea which only lasted for one day.

The three first chimpanzees experimented on were undoubtedly affected by the diarrhoea of the infant, and these experiments proved the infectious nature of infantile diarrhoea. The food could not be accused, and the experiments, being performed in September last, when the temperature was moderate, the summer heat could not be considered as a likely cause. M. Metchnikoff was struck by the constant and abundant presence of *Bacillus proteus* in the stools of infants suffering from diarrhoea. It was present in 36 out of 40 children examined. He then experimented with rabbits at the breast and two young chimpanzees, giving them pure cultures of *B. proteus* isolated from the stools of children and of one of the chimpanzees mentioned previously. The little rabbits and both chimpanzees were very sensitive to the infection, which took the form of a dry cholera, and was fatal, *B. proteus* being found in the stools and in the blood from the heart. He then tried to discover how children became infected with this microbe; *B. proteus* was rarely found in cow's milk, only once in ten samples bought in different Paris creameries, and, moreover, diarrhoea occurred in a number of breast-fed infants. The cause was, therefore, not in the cow's milk; the infection was communicated by the persons who cared for the infants. M. Metchnikoff found the *B. proteus* frequently in the stools of healthy adults during August, September, and October, although the stools of the same persons had been previously examined during the cold weather with negative results. *B. proteus* was found in large quantities in the faecal matter of many animals—cow, horse, dog, and cat—on the surface of meat, and on the outside of cheeses—Camembert, Brie, and Pont l'Evêque; but especially on vegetable foods, especially on salads, radishes, and on grapes. M. Metchnikoff considered that during the hot weather flies transported the microbes from the dejecta of animals on to the food they prefer, especially cheese and grapes, which, being consumed without disinfection, introduced the microbes in quantity into the intestines of persons who, being in constant contact with the infants, contaminated them To prevent infection of infants, the hands and breast of the parent should be well washed with soap, and adults should dip their grapes and vegetables for a few seconds in boiling water and pass a flame over the cheese, as *B. proteus* was easily destroyed since it did not form spores. The cleaning of the streets and destruction of flies would also be valuable prophylactic measures.

At a recent meeting of the Société Médicale des Hôpitaux MM. Jean Troisier and Georges Roux communicated their experimental research on the points of election of the tetanus toxin, using the method employed by MM. Guillain and Laroche for the diphtheria toxin, as described in the BRITISH MEDICAL JOURNAL of November 6th, 1909, p. 1379. At the *post-mortem* examination of a child who died of tetanus they removed various fragments of the nervous system, which were diluted in physiological serum before being injected into guinea-pigs; the injections were made either beneath the dura mater or in the leg. Injection of the emulsion made with a fragment of the floor of the fourth ventricle comprising the masticator nuclei was followed by a typical experimental tetanus, an observation which explained the predominance of contracture in this disease in the sphere of the trigeminal. Inoculations made with fragments of the white bundles from the bulb, of spinal marrow and different nerves, gave no results.

At the recent competitive examination for the post of externe in the Paris hospitals the first place was taken by Mdlle. Romme. This is the first time this honour has been won by a woman medical student. Among the 311 successful candidates 22 were women.

Old students who have followed the courses of bacteriology at the Pasteur Institute will hear with regret of the death after a short illness of Dr. Jean Binot, who was head of the pathological anatomy department, and who was responsible for keeping up the strains of all the microbes, of which the collection at the institute is one of the most complete in existence. The funeral took place on Sunday, November 28th, at the church of Saint-Sulpice.

Correspondence.

AMBULANCE LECTURES AND THE VOLUNTARY AID SCHEME.

SIR,—I have recently received a request to give two courses of ambulance lectures (five lectures in each course), one for men and one for women, in connexion with a scheme originated at the War Office to create voluntary aid detachments in association with the county Territorial Force. I am at the same time informed that many medical men are giving their services free for these lectures—presumably on patriotic grounds—and it is evident I am expected to do likewise.

I strongly object to do so. It has always been customary to pay a guinea a lecture to medical men when giving courses in connexion with the St. John Ambulance Association. It appears, then, we are expected to present the War Office with services the usual market value of which is represented by the round sum of £10 10s. Non-medical supporters of the scheme are asked to subscribe £1 1s. a year, or, if they prefer it, to guarantee £5 in the event of an invasion by a foreign Power. Needless to say, the patriotic layman chooses the latter alternative. Patriotism is to be commended, but surely there should be some sense of proportion exercised in connexion with it. Why should the hard-working medical practitioner be expected to give £10 10s. while the wealthy merchant or country squire is asked for a guarantee of £5?

I think it is most unfortunate that any of the profession, under a mistaken sense of duty, should have committed themselves to a course of action which is likely to have injurious effects in the future. They are creating a very bad precedent. The more we give the more we shall be expected to give. We are imposed upon by friendly societies, boards of guardians, county councils, insurance companies, and now we may add the War Office to the list; and we shall continue to suffer, and deserve to suffer, at their hands until we combine together and insist on proper remuneration for our services.

Some definite scale of fees ought to be laid down by the General Medical Council for services rendered to any public body, friendly society, or insurance company, and any underselling on the part of the profession ought

to be considered unprofessional conduct and penalized accordingly.

All of us have plenty of opportunities of exercising a charitable spirit in our dealings with the poor. No profession does as much work for no pay as ours. It seems quite unnecessary and prejudicial to our interests to extend this charity to Government departments.—I am, etc.,

Stowmarket, Nov. 25th. S. Hillier.

Sir,—May I be permitted to say a word in reply to the letter under the above heading signed by the Vice-Chairman of the Winchester Division of the British Medical Association, which appeared (full of very mixed metaphors) in the Journal of November 27th (p. 1581). His complaints appear to be that he has been asked to assist in the British Red Cross movement, and that the military authorities seek voluntary aid from the civil members of the medical profession.

He suggests that no "civil medical gentleman" should give gratuitous medical service to the State while his "military-clad professional brother" is getting pay for the same work. In Great Britain all regular soldiers are paid, yet plenty of civilians are forthcoming to volunteer for every kind of military work from every class and grade of society throughout the land, but the Vice-Chairman thinks that, because the doctors in the Royal Army Medical Corps are paid, no civil doctor is to volunteer to help his country!

I trust, sir, that few take so low a view of the profession of medicine, thus contrasted with the whole manhood of England, as does the Vice-Chairman of the Winchester Division.

The military authorities have called on every Englishman to take part in the defence of his country, and every class, profession, and trade have responded, except some doctors and some chemists—the doctors because they want money, the chemists because they want rank. The Vice-President says he has already voluntarily given his services to the R.A.M.C., so he ought to know something about Territorial defence. Yet, to put it very mildly, he is entirely wrong in all his facts.

Territorial medical officers *are* paid. When training they receive the full pay and allowances of their rank, which are higher than those of other branches of the service. Thus a man can get his fifteen days in camp free of expense, and when he gets a few years' service, have enough besides to pay his locumtenent during his absence. He also receives, in common with his combatant brethren of the Territorial Force, an allowance to pay for his uniform in joining the R.A.M.C. (T.), as well as allowances for attending lectures and so forth. So the Vice-Chairman's principal contention falls to the ground. Then the Vice-Chairman thinks that the British Red Cross Society and the Territorial Force are the same thing. Let me assure him that they are not. The former, though helped and favoured by the military authorities, is a purely civil society, which hopes to provide assistance to the army (regular and territorial) in case of invasion. It is open to all medical men to work for it, either gratuitously or not, from patriotic or other motives, just as they have done for St. John Ambulance Association in the past. If they require payment, they must look to receive "the half-hearted coin"—whatever that may be—from the Red Cross or the Order of St. John, not from the military authorities, as the Vice-Chairman seems to think.

I know not in what capacity your correspondent has given his services to the R.A.M.C. in time of war, but it would be well for him to acquaint himself with facts before trying to do what damage he can to the cause in time of peace. We know what happens if the blind lead the blind.—I am, etc.,

E. C. Freeman, M.D.,
Colchester, Nov. 27th. Major, R.A.M.C. (Ret.).

THE TERRITORIAL NURSING SERVICE.

Sir,—I have a small cottage hospital, built and supported by my husband and myself, of which an account and illustrations appeared in your Journal some two or three years ago. In that account you were kind enough to describe it as one of the best of its kind in Great Britain.

I have recently been asked to allow my nurses to join the County Territorial Nursing Corps, a request which I have refused. I am told that I had better not let it be known in the county that I have refused, as I shall be considered disloyal. I understand that if my nurses join the corps, in time of war they would be called out to serve in some temporary hospital in the county, leaving my hospital—which is fitted in a thoroughly up-to-date manner, with operating theatre, etc.—to be closed.

I have four nurses, who are fully occupied, and when there is any great pressure of work I have to employ an extra one from a London hospital.

In time of war the hospital would certainly be available for either officers or men if the authorities cared to send them there, and it seems to me folly to close even a small hospital which is in thorough working order at a time when hospital accommodation is sure to be limited.

I should, however, greatly value your opinion on the subject, as, except for my nurses themselves, who had no wish to join, my views do not seem to be shared by others.

There are so many nurses either on the private staff of hospitals or else working on their own account, that it seems to me that it is from them that the Territorial Nursing Corps should recruit its nurses.—I am, etc.,

November 30th. Halfa.

*** We are not in a position to give an authoritative answer, but we feel sure that a proper interpretation of the scheme for the Territorial Nursing Service would not involve denuding any hospital in working order of its nurses. There may be some local misunderstanding, and we would advise our correspondent to obtain definite information as to the size and situation of the "temporary hospital in the county."

A STATE UNIVERSITY OF MEDICINE AND SURGERY.

Sir,—I must thank you for so fully reporting my remarks and suggestions on the establishment of a State university embodying all diploma-granting bodies in the three divisions of the kingdom as a one-portal to the profession at the Lord Mayor's Day dinner at the Apothecaries' Hall. On that occasion the President of the College of Physicians said that he thought that a State University of Medicine was impossible as there could not be a university with only one faculty.

I think that point need not cause much anxiety, for if a charter were granted to a State university (with teaching powers where advantageous), it certainly would not remain long with only one faculty. There are other professions besides our own requiring State supervision, and there are many subjects of State importance which may be classed among arts and sciences on which the welfare of the nation materially depends, and which must ere long be stimulated by university encouragement.

But what are the chances of success of the plan which the two Royal Colleges are endeavouring to promote and which their representatives will propose when witnesses before the Royal Commission? Essentially it is that the University of London should accept the examinations and the somewhat altered education required by the diploma-granting bodies and grant to their examinees the degree of M.B.London.

Now the Faculty have again and again refused to sanction any lowering of the standard of the degree and will do so yet again. The Senate will not act without their consent, and there remains only the hope that the Royal Commission will recommend Parliament to compel the degradation of the standard of the degree. Will they do so? The colleges put forward no other alternative except what I cannot but think an undesirable one—the possibility of combining with some other existing university.

As Sir Douglas Powell said truly enough, the profession has been agitating for thirty or forty years to bring about an arrangement that would make a degree accessible to the London students. Should this Royal Commission prove a failure we may look forward to another thirty or forty years' agitation, which will probably be sufficient to bring about the decease of the diploma-granting bodies and medical schools of London. If a feasible scheme can be put before the Royal Commission, it is more

than probable that they will accept and recommend it.—I am, etc.,

Ashampstead, Nov. 24th. A. T. NORTON.

PS.—I need not comment upon the letter of Mr. Elliot-Blake of Bognor more than to say that his "working points" or explanatory "rider" are on a par with the English of the motion he proposed at the meeting of the Fellows and Members at the College of Surgeons (p. 1583), and that gratuitous rudeness is not an additional strength to an argument, but an exhibition of the vulgarity of the author.

THE JUBILEE OF THE DENTAL CHARTER.

SIR,—The dental surgeons have shown themselves desirous of commemorating the jubilee of their charter, and the Royal College of Surgeons of England, as the first examining body to grant diplomas in dental surgery, has endeavoured to show its interest in this branch of the profession, first, by accepting the trust of the Odontological Museum, which is now accommodated in a room adjacent to the Hunterian Collection; and secondly, by entertaining the leading members of the profession at a dinner within the precincts of the College. I would venture to suggest that this movement might well be directed towards a more permanent memorial of the jubilee of the Dental Charter by establishing a research scholarship and demonstratorship in connexion with the Dental Museum.

There are already two small endowed prizes, the Tomes and Cartwright prizes, administered by the College, the one awarded every third and the other every fifth year; but the dental profession is deserving of something of a much wider scope than these for the stimulation of research and for the higher teaching of its scientific branches.

My own view favours a more ambitious scheme than anything in the form of a mere prize, whether awarded after examination or conferred in recognition of original work completed. I would ask for the modest sum of £10,000 to endow a Research and Teaching Demonstratorship in connexion with the Dental Museum. In this way not only would a scientific worker be secured, but he would, by his demonstrations attract the students from the various dental hospitals to study in the Dental Museum. Such a sum could, I am sure, be easily collected from among the dental surgeons alone; but if they were to impress upon their patients the necessity of endowing dental research there need be no hesitation in raising the sum I have suggested to £50,000, whereby not only research and teaching demonstratorships might be established but travelling scholarships might be founded which would be of great advantage in keeping English dentistry in touch with that of foreign countries.

It is some twenty-five years since I first began to advocate the bringing of the dental surgeons back within the pale of the profession, and giving them the same opportunities as ophthalmic, aural, and other specialists. One could scarcely have anticipated so encouraging a development as has occurred within so short a period. The dental surgeons have not been slow of late to seize the occasions for better recognition; and by placing the Odontological Society under the aegis of the Royal Society of Medicine and by handing over their superb museum to the care of the Royal College of Surgeons, they have shown their desire to be associated with the general body of the medical profession. Now, I think the time has come for the further development of the scientific side of the branch, in which direction several members have already gained great eminence.

Should my suggestion find favour with the dental section of our profession, I should be pleased to co-operate with any interested in this project; but it must be distinctly understood that I write quite unofficially, though I have little doubt that the Council of the Royal College of Surgeons would give its consent to the administration of such a research demonstratorship as that proposed, if the money were forthcoming for its endowment.—I am, etc.,

London, W., Nov. 27th. R. CLEMENT LUCAS.

THE ROYAL COLLEGES AND THE UNIVERSITY OF LONDON.

SIR,—There appears to be a serious attempt on the part of the colleges to join the university. This should be done in such a way as to silence the wearisome cry of "a degree for London students." A degree is not a licence to practise, which should be accessible to all but the most indolent students at the end of the present five years' curriculum. A graduate is one who has passed up certain steps or degrees in education, and should be ticketed accordingly, by a university examining board.

Surely colleges are meant for teaching, and the present institutions in Lincoln's Inn Fields and Pall Mall do not fulfil this purpose. Probably they will do this if they allow the university still to occupy its proper place.

The matriculation examination should be made rather less difficult; having passed this, as well as the senior Oxford examination, I would suggest that the standard of the latter should be the lowest to enable a student to enter the medical profession.

There should be a licence degree (not to be called M.B., M.R.C.S.), for men would pass the conjoint but never reach the present M.B. standard. This should be the third class degree. The M.B. would remain the second class degree, reserving the highest place for the Master in Surgery and the Doctor in Medicine. These places should still be for the best students only, and to lay them open to the average man is to degrade the university. The largest city in the world should still be able to confer the best degrees.—I am, etc.,

Castle Cary, Nov. 30th. CAREY COOMBS, Sen.

THE MENTAL SYMPTOMS IN AORTIC ANEURYSMS.

SIR,—Professor Osler's Schorstein Lecture in the BRITISH MEDICAL JOURNAL of November 27th (p. 1509) gives due credit to the British army medical officers as early and successful workers on the subject of the relations between syphilis and aneurysm. And it was at Netley many years ago that I found and studied the best material bearing on that part of the subject. But I write to mention the evidence coming from part of the later clinical material from precisely the same general sources as those on which was based the work done on the subject of syphilis and aneurysm by the Netley School of Military Medicine. I refer to the mental changes so often coming with the large and deadly aneurysms of the aorta.

The cases concerned here were all military patients, invalided from the army, and were suffering from aortic aneurysms supervening on syphilis of the artery; had been patients at Netley, and in the mental hospital there for observation; thence transferred to London they came under my close observation.

The following is a short summary of the mental changes in question, and is practically an abridgement of experience which was more fully stated in my article in *Brain*, the journal of the Neurological Society of the United Kingdom, vol. xii, 1889, p. 117, on Aortic Aneurysm and Insanity. Only cases verified by careful necropsy were included in that article.

In some cases of *thoracic* aortic aneurysm there is either the production of mental disorder or distinct modification of the previous mental state. These effects are chiefly due to one or more of several factors, varying according to the position, size, and relations of the aneurysm, and the preceding mental and physical state of the patient in different cases.

One factor consists of the morbid afferent impressions coming from the altered vessel itself and the usually pulsatile expansile tumour it now forms.

Another factor is the circulatory disorder induced by aortic aneurysm of thorax or abdomen, both the general disorder of circulation and that of the head more particularly. When the aneurysmal sac remains patent, not merely is there the diversion and tumultuous rush into the sac of a large share of the blood stream, thus interfering with calm and equable supply to brain and other parts, but also the aneurysm in many cases presses on blood vessels; if it presses on an artery, checking or stopping more or less the arterial supply to some parts—for example, the brain—and, as a correlative result, making that to other parts correspondingly fuller and more active; if it presses on a vein, damming back the blood stream in the latter and tending to produce passive congestion in the region it should drain, as well as coagulation in the vein itself. To this may be added compression

of the lymphatic vessels and its results. The aneurysmal compression is important and may affect some of the blood or lymph channels, nerves, or nerve ganglia in the thorax, relating specially to the vegetative or visceral life, chiefly the vagus and its branches, the phrenic and the sympathetic. The important symptoms, whether irritative or inhibitory, which may thus arise—be they vasomotor, cardiac, pulmonary, respiratory, gastric, or hepatic—only require bare mention.

A third group comprises structures such as the vertebral thoracic bones and muscles and nerve fibres to and from trunk or limbs. The painful or spasmodic or paralytic conditions arising from compression of these may be the source of morbid material for mentation and assist in the production or modification of mental disorder.

When with aneurysms of the thoracic aorta mental symptoms appear to arise indirectly, as already stated, they are usually of the following general characters: Extraordinary illusions, hallucinations, and delusions of persecutory and hypochondriacal nature. They may be delusions of being annoyed and tormented, or as to bodily njuries, which may vary extremely in particulars, and often are most minutely described and attributed, each to some very special and peculiarly distinct action or operation on this or that part of the patient's frame, as, for example, by animals imagined to have gained access thereto; or delusions as to hostile occult influences working against the patient, culminating in assertions as to the particular effects of imaginary galvanic batteries, "mesmerism," and so on, associated, perhaps, with vivid hallucinations, especially of hearing. These persecutions and injuries, entirely imaginary, are usually by the patient attributed to influences originating from outside—for example, to invasion by animals, and more often to the acts of hostile persons whom he has formerly met or known, and who have followed him to the place, where he is now, and is at their mercy. Against these persons he demands police or magisterial protection; and that condign punishment shall fall on these tormentors; although delusions of ill-treatment by those around him, his fellow-patients or nurses, may coexist with, or replace, the former ones, and may lead to acts of violence—or, rarely, even homicidal attempts. Present in some cases; systemization of the delusions is in others, feeble, or incomplete, or absent.

The emotional state is usually a mixture of depression and irritability. There may be a gloomy, sombre, taciturn, or a sullen morose state; or one of anguish, distress, anxiety, and free complaint as to annoyances, damages, physical and mental persecutions; with desire to seek redress, and expostulation against detention within reach of the imaginary foe.

In eight of my cases of thoracic aneurysms of the aorta; necropsy completed the record of the cases.

In three other cases the cause of death was abdominal aorta aneurysm predominantly. But these three cases were complicated by the effects of *severe heart disease* and *its* mental effects; and by implication of the *thoracic portion of the aorta* in *aneurysmal dilatation* also; but to a less severe degree than the abdominal portion.—I am, etc.,

London, Nov. 30th. W. JULIUS MICKLE, M.D., F.R.C.P.

THE STRUCTURE OF THE PANCREAS.

SIR,—In a letter on "The Structure of the Pancreas," published in the JOURNAL of November 6th, Professor Swale Vincent has been good enough to comment on a paper read by us before the British Medical Association at Belfast, and published in the JOURNAL of September 11th. We regret that Professor Vincent should think that we ignored the work of Mrs. Thompson and himself. As a matter of fact, we were familiar with all his papers, with the exception of that on the elasmobranch pancreas to which our own paper had special reference. The *Transactions of the Royal Society of Canada* are not to be obtained at the libraries of the Royal Colleges, and we are therefore greatly indebted to Professor Vincent for having since sent us a copy of his paper.

Further, as he supposes, our paper was of the nature of a preliminary communication, and was written rather as an aid to the demonstration of our specimens than as a complete account of the subject and its literature. We are glad to find that our work agrees in the main with that of Professor Vincent and Mrs. Thompson. We, however, have not been able to convince ourselves of the existence of "bathycrome" tissue, and we understand from Professor Vincent's latest paper that he himself is in doubt about it, and thinks that it may be an artefact produced by the process of fixation. If this tissue does not exist, it seems rather unnecessary to talk of "leptochrome" tissue instead of using the more familiar term islet.

Professor Vincent, in further criticizing our paper, says that whereas there is overwhelming evidence in favour of a structural continuity between islets and acini, it is as yet too early to express an opinion on the question of a functional relationship. Surely if, as Professor Vincent himself has shown, islets and acini are converted the one into the other by starvation and feeding, *that* is evidence of a functional continuity between the two tissues.

In conclusion, we might perhaps call the attention of Professor Vincent to a paper by us entitled "The Pancreatic Juice and Glycosuria,"[1] in which further evidence is adduced on the question of the relation between the external and internal secretions of the pancreas.—We are, etc.,

J. STRICKLAND GOODALL.
HERBERT G. EARLE.

Physiological Department, Middlesex Hospital Medical School, Nov. 30th.

LONDON HOSPITALS AND SCHOOL CHILDREN.

SIR,—In the JOURNAL of November 6th the Chairman of St. George's Hospital, quite unasked, informed the medical profession that two clauses in his agreement with the London County Council were of great importance. These are (1) that the London County Council will make inquiries to prevent abuse, and (2) that his hospital will do likewise.

In a letter appearing in your issue of November 13th I asked the Chairman to inform the medical profession what forms of inquiry these were that he evidently considers satisfactory and on which he relies to prevent abuse.

In a communication appearing in your issue of November 27th he replies (1) that the London County Council "makes inquiries, and if they find," etc.; and again (2), with regard to St. George's Hospital, that "we reserve the right to make any inquiry we may think fit," etc.

To say to the medical profession that all is well at his hospital, and when urged to take us into his confidence and explain in detail the reasons for his conclusions, for Mr. West to reply in the same phraseology is, to say the least, hardly convincing.

Will Mr. A. William West be good enough to lay before the medical profession *in full detail* the procedure by which these inquiries are carried out, and so allow us to judge for ourselves as to their sufficiency? The points as between myself and St. George's Hospital, although of interest, are not at the present moment so important. Full proofs of the latest case of abuse of that hospital's out-patient department that I know of have been sent to Mr. West. I made a mistake in saying that the mother said that the child had been attending for eight weeks; it should have been eight months. I omitted to add that, under the advice of the out-patient doctor, the mother and daughter had incurred the expenses attached to six weeks' residence in boarding houses at the seaside, in order to help the cure. Surely a general practitioner should be capable of tackling a case of menorrhagia; and the "sick poor" are hardly those to be expected to be able to take rooms at the seaside at their own expense.—I am, etc.,

London, S.W., Nov. 27th. E. ROWLAND FOTHERGILL.

⁂ In the letter which appeared in the JOURNAL of November 6th, Mr. West's name was incorrectly printed "A. William Wise."

[1] BRITISH MEDICAL JOURNAL, August, 1908.

DURING the present season Messrs. Yeoward Brothers, Stanley Street, Liverpool, will issue special return tickets by their steamers to Portugal and the Canary Islands on preferential terms to members of the medical staffs of medical institutions. The steamers sail from Liverpool weekly, but special tours are made by certain steamers usually every alternate week.

Medico-Legal.

WORKMEN'S COMPENSATION.

Incapacity due to Former Employment.

A DIFFICULT point may arise in relation to compensation if it be shown that the incapacity is partly due to what happened to the man in his former employment. In a recent Scottish case the pursuer claimed in respect of injury to his knee. The sheriff found that pursuer about two years ago, whilst in the employment of Messrs. Mechan and Son, sustained a wrench to his knee. On several occasions since, his knee had given way while he was raising his body from the ground. On December 4th the pursuer was in the employment of defenders, and in rising from a kneeling position he again felt the same kind of pain. On being taken to the infirmary it was found that the internal cartilage of the right knee was torn. The rupture of the knee cartilage on December 4th, 1908, was the result of the strain experienced two years ago, when pursuer was in other employment than that of the defenders. The sheriff found that the pursuer had failed to prove that he was injured by accident arising out of and in the course of employment with defenders, and refused the application.

Miners' Nystagmus.

This complaint has already formed the subject of claims in many cases, and it appears that liability may have to be shared by several different employers. A claim was heard at Pontypridd on September 8th in which no less than four companies were involved. According to the Act the liability is retrospective for twelve months where a person has been employed at work likely to give rise to this complaint. In the present instance plaintiff had been employed at four different collieries, the owners of all of which were parties to the action. As the result of the disease the wages of the applicant had fallen 18s. a week, as he had to work on the surface instead of underground, and accept light employment. The facts were not disputed, but the difficulty was to determine which company was liable. Medical testimony was given that the disease was progressive, and might have been in existence in a patient for some years before permanent discomfort was brought about, but so long as he worked underground the disorder would become more pronounced. Dr. Tribe, in evidence, said that the process of development had been going on for quite twelve months, if not longer. Dr. Arthur Jones stated that in July plaintiff sought his advice, and he was quite convinced that it would be injurious to him to continue working as a collier. In the result the judge awarded compensation, dividing it between the collieries in proportion to the time the man had worked there.

FEES FOR MEDICAL EXAMINATIONS.

DR. A. T. BRAND (Driffield, E. Yorks.) writes: It does not appear to be generally known that the fees for all medical examinations of workmen who have sustained injuries for which they claim compensation from their employers, must be paid by the employer, and not by the workman. This applies both to the initial examination and certificate which are necessary to enable the employer to claim in turn from any insurance company with which he may have contracted to relieve him of the responsibilities placed upon him by the Act, and also to all subsequent examinations and certificates which may be required from time to time, until the claim shall have been settled.

My experience is that the employer generally endeavours to evade payment of the fees, and to put the liability for them upon the workman, on the ground that it is the injured man who benefits, forgetting, or not realizing, that it is he himself who benefits under the certificates, since he could not have his claim entertained or paid by the insurance company without them. The injured man is nowise concerned as to the source of his pay so long as he receives it, and all that he has to do is to be willing to submit himself to medical examination when called upon to do so, either by the employer or by the insurance company on his behalf. The injured man neither seeks nor desires a special medical examination; but any medical treatment he may receive has to be paid for by himself, and not by his employer.

The Act clearly places the liability for payment of the fees for all medical examinations upon the employer, as stated in Paragraphs 4 and 14 of Section 1 of the First Schedule of the Act. Dr. Brand adds that he thinks medical examiners and others will find the handbook published by Andrews and Co., 173, Old Street, London, E.C., which contains both the Act itself and a digest of it, useful for reference. The price is 1d.

ASSISTANTS IN COLLIERY PRACTICES.

SIGNEE asks whether a surgeon to a body of colliers who is bound by agreement not to undertake private practice in the district can require his assistants to sign a bond not to practise in the neighbourhood, and whether should such a bond be signed it would be legally binding.

*** It is usual for the signing of such a bond to be a condition of the employment of an assistant. If the assistant signs the bond he is then bound by the terms of it.

Universities and Colleges.

UNIVERSITY OF CAMBRIDGE.

THE following degrees have been conferred:

M.D.—G. H. K. Macalister, Joh.

M.B.—L. Reynolds, Trin.; R. Cox, Gonv. and Cai.; W. G. Parkinson, Emm.

UNIVERSITY OF WALES.

Degree Day.

THE annual congregation for admission to degrees was held at Cardiff on November 26th, in the Drapers Company's library of the new buildings in Cathays Park, and the students turned out in great force and in high glee to applaud their successful fellow-workers. The Lord Mayor and the members of the Corporation of the City of Cardiff had an ovation as they took their seats. Sir Isambard Owen, Senior Deputy Chancellor of the University, presided, with the Vice-Chancellor, Principal Griffiths, and Mr. Charles Morgan representing the Guild of Graduates. There were also present: Sir John Williams, Bart., K.C.V.O., General Sir James Hills-Johnes, Principal Roberts, Principal Sir Harry Reichel, Mr. Angus, the Registrar and representatives of the Senate and Council, and also Sir Alfred Thomas, M.P., and Mr. Llewelyn Williams, M.P. Professor A. A. Read was chief marshal. The graduates were presented by the Principal of the college to which they belonged, and the Vice-Chancellor conferred the degrees, the Senior Deputy Chancellor completing the ceremony with the time-honoured Latin benediction. Thirteen received the B.A. with first-class honours, 13 with second, and 41 with third, while 60 received the B.A. without honours, and 3 received the degree *in absentia*, 1 with first-class and 2 with second-class honours; 7 received the degree of B.Sc. with first-class honours, 4 with second-class, and 2 with third, while 32 received the degree without honours. There was only 1 LL.B., while 5 persons received the B.D., 16 the M.A., and 3 the M.Sc. Four honorary degrees were conferred—that of M.A. on Mr. John Ballinger, Librarian of the National Library of Wales, and the Rev. Evan Rees (Dyfed), the Archdruid; that of D.Litt. on Professor Kuno Meyer, Ph.D., Professor of German and Reader in Celtic in Liverpool University; and that of LL.D. on the Solicitor-General, Sir S. T. Evans, K.C., M.P.

UNIVERSITY OF BOMBAY.

The Calendar.

THE *Calendar* of the university for the academic year 1909–10 has been published in two volumes, of which the first gives in some 900 pages a very full account of the constitution, regulations, and membership of the university. The second volume includes in 340 pages reprints of all papers set in all the faculties during the recently concluded year. The list of graduates in the medical faculty shows a steady increase from year to year, and the accounts of endowments and prizes occupy nearly 130 pages.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Admission to the Fellowship.

THE Council of the Royal College of Surgeons in Ireland adopted on November 18th new regulations for admission to the Fellowship which give final effect to an intention expressed some two years ago to abolish any facilities in the way of examination to qualified candidates of a certain standing. Under the new regulations all candidates alike will have to pass two examinations; the first, dealing with anatomy, physiology, and histology, is conducted partly in writing and partly viva voce and includes practical work; the second deals with surgery, surgical anatomy, and physiology. This examination also is partly written and partly viva voce, and includes clinical work and the performance of operations. At each examination the candidate must pass in all subjects at one time. Further particulars can be obtained from the registrar at the college.

Fellowship Examination.

The following candidates have been approved at the examination indicated:

FIRST FELLOWSHIP.—A. Chance, O. J. O'Hanlon, H. J. Smyly.

FINAL FELLOWSHIP.—D. Adams, Sheffield; W. V. Coppinger, Captain, I.M.S.; M. G. Dobbyn, Bristol; J. B. Dordi, Bombay; M. W. Falkner, Captain, R.A.M.C.; J. K. Freyer, New South Wales; C. Greer, Melbourne; H. W. A. Kay, Pretoria; Miss K. F. Lynn, Rathmines; F. McKee, Hillsborough; J. B. Moore, Belfast; C. E. Murphy, Dover; T. North, London; T. T. O'Farrell, Dublin; H. R. C. Rutherford, Ballinasloe; W. S. Sharpe, Major, R.A.M.C.; C. Sullivan, Rathangan, co. Kildare; W. R. Wilson, Penzance.

THE London County Council, finding that it had no statutory powers, and having regard to the special circumstances of London and to the numerous interests concerned, has resolved to ask the Local Government Board to appoint a departmental committee to inquire into the questions of the establishment of public slaughter-houses in London and of food inspection generally.

Obituary.

RICHARD THEODORE STACK, M.D., F.R.C.S.I.,

CONSULTING SURGEON TO THE DENTAL HOSPITAL OF IRELAND, DUBLIN.

WE have to record the death at his house at Stillorgan, near Dublin, of Dr. R. T. Stack, whose career is a striking example of the way in which the cruel blows of fortune may be overcome by pluck and perseverance. Dr. Stack, who was born in 1849 and graduated M.D.Dub. in 1874, had a most brilliant career as a student; he began by obtaining a classical scholarship, he then obtained a medical scholarship and many prizes, took the first place in the university medical examinations, and obtained first the medical and then the surgical travelling prizes, which enabled him to visit foreign schools, and to reside for some time in Vienna. On his return to Dublin he was attached to the Richmond Hospital, and appointed Demonstrator of Anatomy in the University Medical School. His hearing, however, soon became so defective that he had to give up the hope of practising either medicine or surgery, and determined to take up dentistry. He joined the dental school of the Harvard University, and took the degree of D.M.D. there in 1877. In the following year he became F.R.C.S.I., and commenced practice as a dentist in Dublin. At that time dentistry was, we are told, at a very low ebb in Dublin, but Dr. Stack's tireless energy and enthusiasm commanded the generous support of his medical and surgical brethren and enabled him to transform the position of the art. He was the founder of the first dental hospital and school in Ireland; he was also dental surgeon to the Adelaide Hospital. The appreciation in which Dr. Stack was held by his colleagues is shown by the fact that they presented to him his portrait, which now hangs in the committee room of the Dental Hospital. Some eleven years ago he suffered an attack which deprived him of the use of his right arm and greatly interfered with his powers of speech. Dr. Stack attracted to himself hosts of friends, and was one of the band of distinguished Irishmen who met at the house of the late Lord Justice Fitzgibbon. He was, when a younger man, a keen fisherman, and knew, as few have ever known, the haunts of salmon and trout in the neighbourhood of Mullaghmore, where also his acts of charity and constant interest in the people made his name idolized.

ALFRED BARRATT, M.R.C.S.,

ALDERMAN OF THE CITY OF BIRMINGHAM.

WE regret to record the death of Alderman Alfred Barratt, who died at the age of 81 at his residence, Calthorpe Road, Edgbaston, Birmingham. Mr. Barratt was a native of Birmingham, and like his brother, the late Mr. O. W. Barratt, of Holloway Head, who died a few months back, was trained for the medical profession at Queen's College, Birmingham. He was admitted L.S.A. in 1855, and became L.R.C.P.Edin. in 1860, and M.R.C.S.Eng. in the same year. For about thirty years he practised in Great Hampton Street, Birmingham, where he was exceedingly popular, but nearly twenty years ago he disposed of his practice and went to live in Edgbaston. He took a considerable part in the public work of the city, and in 1870 he stood in the Liberal interest for the representation of Hampton Ward, afterwards St. George's Ward, in the Town Council, and defeated the late Mr. W. M. Ellis, the Conservative candidate. Mr. Barratt did excellent work on the Borough Inspection Committee and the Sewage Committee, of which he was for a time the Chairman. He served on many other important committees in which his professional knowledge made him specially useful. For fifteen years he worked as a Councillor, and in 1885 he was advanced to the dignity of an Alderman. In addition to his work as a member of the City Council, he performed equally useful service for nearly twenty years on the Birmingham Board of Guardians, of which he was Chairman in 1885. He retired from the Board in 1894, but remained a member of the Board of Overseers until his death.

Alderman Barratt was a widower, his wife, formerly a Miss Lowe, dying in 1894. The funeral took place at the Crematorium on November 19th.

THOMAS GRAHAM, M.D.,

CONSULTING SURGEON TO THE PAISLEY INFIRMARY.

BY the death of Dr. Thomas Graham, who passed away quietly in his sleep on November 18th, Paisley loses one of its best known citizens and its oldest medical practitioner. He was born at Lismahagow in 1836, and was thus in his 74th year. He spent his whole life in Paisley, where he began his career as a druggist, but eventually made up his mind to study medicine. Entering Glasgow University, he graduated M.D. in 1860, taking the L.F.P.S.G. in the same year. During his attendance at the Glasgow University classes, on account of the want of suitable travelling facilities, he walked to the city in the mornings and back to Paisley, after attending classes at the Botanic Gardens. Practising in Paisley for over fifty years, he was able to conduct a large practice with much vigour until a few years ago, when an attack of pneumonia prematurely aged him. He held many appointments in Paisley, and was Honorary Consulting Surgeon to the Paisley Infirmary, Medical Officer to the Poorhouse and Asylum.

Dr. Graham was held in much respect by his professional brethren. Cultured and courteous, he was the life of a social gathering; he was a great admirer of Burns, and was in the habit of reciting many of his poems. His son is in the profession and settled in South Africa after the Boer war, to whom and his widow and four daughters the sympathy of Dr. Graham's many friends is extended.

DEATHS IN THE PROFESSION ABROAD.—Among the members of the medical profession in foreign countries who have recently died are Rear Admiral Christopher James Cleborne, M.D., of the United States Navy, aged 70; Dr. George E. Post, for many years head of the Medical College of Beirut, and author of works in various languages on botany, zoology, physiology, surgery, medicine, and the Bible, aged 71; Dr. Alois Monti, Professor of Children's Diseases in the University of Vienna, who founded, in conjunction with Professor Babinski, the *Archiv für Kinderheilkunde*, and author of numerous contributions to the literature of his speciality aged 70; Dr. Wehmer, of Berlin, a leading hygienist and Medical Councillor in the Chief Police Bureau, aged 54; Dr. Axel Otto Lindfors, Professor of Obstetrics and Gynaecology in the University of Upsala; and Dr. Mayet, sometime Professor of Pathology in the University of Lyons.

Public Health AND POOR LAW MEDICAL SERVICES.

RETURN OF CONTRIBUTIONS PAID TOWARDS SUPERANNUATION.

HORNBEAM, who is 39 years of age, and has been district medical officer for the past five and a half years, but is now obliged to retire from practice, owing to a complete breakdown in health, asks whether under such circumstances he can claim a return of his contributions already paid towards superannuation?

*** By Clause 8 of the Superannuation Act any officer who has *not* become entitled to superannuation under the Act, but who loses his office or employment from *any cause beyond his own control* other than voluntary resignation, is entitled to receive out of the common fund of the union a sum equal in amount to all his contributions towards superannuation. The sanction of the Local Government Board is not required.

VACCINATION IN WORKHOUSES.

T. P. asks: (*a*) Has the medical officer in a workhouse the right or power to vaccinate a child in the workhouse without receiving the consent of the parents? (*b*) Could the parent or parents object under the conscientious objection clause when the children are supported by the rates?

*** (*a*) No. (*b*) The parent has the right to obtain exemption in the manner provided for by the law. The Vaccination Act, 1898, Section I, Subsection V, enacts that: "Notwithstanding any regulation of any lying-in hospital or infirmary or other similar institution, the parent of any child born in any institution shall not be compelled under such regulation or otherwise to cause or permit the child to be vaccinated at any time earlier than the expiration of six months from its birth." Under the provisions of the Vaccination Act, 1907, this subsection remains in force.

Medical News.

THE Bradshaw Lecture will be delivered at the Royal College of Surgeons by Mr. F. Richardson Cross at 5 p.m. on Friday, December 10th. The subject is the Brain Structures Concerned in Vision and the Visual Field.

AT a meeting of the Cottage Benefit Nursing Association, to be held at Denison House, Vauxhall Bridge Road, Victoria, S.W., on Tuesday next, at 3.30 p.m., the Hon. Sydney Holland will open a discussion on State registration of nurses.

IN connexion with the Twenty-fifth Congress of the Royal Sanitary Institute which is to be held in Brighton in September next, an exhibition of sanitary apparatus and appliances, and articles for domestic use and economy, will be held in the Royal Pavilion.

THE annual lecture under the Richard Middlemore Post-Graduate Lectures Endowment will be given at the Birmingham and Midland Eye Hospital by Mr. H. Eales, senior surgeon to the hospital, on December 21st, at 5 p.m.; the subject of the lecture will be myopia.

THE next course of post-graduate lectures arranged by the Berlin Dozenten-Vereinigung will begin on February 28th and terminate on March 26th, 1910. Particulars can be obtained on application to Herr Melzer at the Langenbeckhaus, Berlin.

AT a sessional meeting of the Royal Sanitary Institute to be held at the Parkes Museum, 90, Buckingham Palace Road, S.W., on Wednesday next, at 8 p.m., a discussion on the collection and disposal of refuse will be opened by Mr. J. S. Brodie, M.Inst.C.E.

REFERENCE was made in a recent issue of the JOURNAL to a report that the Nobel Prize in Medicine was to be awarded this year to M. Roux. It is now stated, on what seems to be good authority, that the prize will be given to Professor Theodor Kocher, the distinguished surgeon of Bern.

THE annual gathering of the Glasgow units of the Royal Army Medical Corps, which on this occasion will take the form of a concert and distribution of prizes, in place of the dance which has been given during the past two seasons, will be held in St. Andrew's Halls, Glasgow, on the evening of December 15th. The units are the Lowland Mounted Brigade Field Ambulance, the 1st and 2nd Lowland Field Ambulances, and the 3rd and 4th General Hospitals. Colonel Sir Geo. T. Beatson, K.C.B., M.D., V.D., administrative medical officer of the division, will preside.

THE Secretary of the London Post-Graduate Association, which admits ticket holders to the practice of certain general and special hospitals in London, informs us that special classes for post-graduate students only are now being held at University College Hospital, Westminster Hospital, the Brompton Hospital for Consumption and Diseases of the Chest, the Hospital for Sick Children, the London School of Tropical Medicine, the Medical Graduates' College and Polyclinic, the National Hospital for the Paralyzed and Epileptic, and the Royal London Ophthalmic Hospital (Moorfields). Additional fees are charged by the hospitals; further particulars can be obtained by writing to the secretary of the association, 20, Hanover Square, W.

AT a meeting of the Governors of Middlesex Hospital on November 25th, the chairman, Lord Cheylesmore, stated that Mr. E. T. Hall had been chosen to prepare plans and superintend the erection of the new cancer buildings of the Cancer Institute to be built out of Mr. H. I. Barnato's bequest of a quarter of a million, on a site abutting on the hospital premises, a long lease having been granted by Mr. Charles Berners, a member of the board, on very moderate terms. A sum of £5,000 had been received from the executors of Lady Goldsmid; a portion was to be devoted to the endowment of two beds, one in the general wards, the other in the cancer wards, in memory of the testatrix, and the residue was to be applied to the general purposes of the cancer fund, or on behalf of the investigation department, as the board might determine.

AN exhibition of china and earthenware manufactured and glazed without lead was open for three days at Caxton Hall last week. It was of the same type as that held at Church House, Westminster, three years ago, but on a much larger scale. The exhibits included pottery of every kind, from the humble pie dish up to highly ornamental vases. The exhibition proved conclusively that in the production of china utensils and other household ware lead is not a necessity, and that those who dispense with its use can fully hold their own, so far as excellence and attractiveness of ware are concerned, with other manufacturers. It is to be hoped, therefore, that the public will commence to ask for leadless glaze at china shops, and thus help to eliminate a source of disease in the pottery districts. At present such china appears to be slightly more expensive than that of ordinary type, but the difference is not very great and will doubtless disappear so soon as a strong demand for china of this kind arises.

THE autumn dinner of the Irish Medical Schools' and Graduates' Association took place at the Hotel Cecil on November 24th, its president, Dr. Mouillot, of Harrogate, being in the chair. The company, which, as usual, included many ladies, was a large one, some two hundred members and guests being present. The toast to the latter was given by Dr. McManus, who coupled with it the name of Lord MacDonnell, and incidentally claimed for Irishmen that whatever else their critics might say about them, they at least had the virtue of hospitality. They were always ready to welcome the new, and speed the parting, guest to the last penny of their own income, and failing that to spend the last penny of the income of some other person. In his response Lord MacDonnell spoke of his early days as a student at Queen's College, Galway. After taking his degree in Arts he had hesitated for some time between medicine and the Indian Civil Service, but at length the *vis a tergo* of the dissecting room and the *vis a fronte* represented by the mystic East decided him against medicine. In his later official life in India he had been brought into close relations with the medical profession, and had received from the chief medical and sanitary officers of the province which he was then ruling the most valuable assistance and support. During the course of the evening there was a pleasant interlude in the form of the presentation to Dr. T. Hobbs Crampton of an illuminated address in acknowledgement of his great services for many years in the office of Metropolitan Secretary of the Association, which he is now vacating. The toast to "Our Defenders" was acknowledged by Sir Alfred Keogh, who is president-elect of the Association.

AT a meeting of the Army and Navy Male Nurses' Co-operation (47B, Welbeck Street, W.) held at the Grafton Galleries on November 29th, and attended by Princess Louise, a report read by Sir W. H. Allchin, in the absence of the president, Sir Frederick Treves, stated that 300 cases had been nursed during the year, and that the staff now numbered 33 and would, it was expected, be increased to 50 during the present winter session. The executive looked forward to a time when the association would have 100 nurses in full employment and would be entirely self-supporting. The number of beds in the residential home had been increased from four to nine. Sir William Allchin added that during the past twenty-five years, although much had been done to improve the status and efficiency of the female nurse, the facilities which she enjoyed had been denied to the male, whose opportunity for training was confined to the magnificent hospitals belonging to the army and navy. The co-operation represented an endeavour to retain the professional services of these men on their retirement into civil life, and the public might be assured that the executive committee was fully awake to the necessity of insisting upon the absolute fitness and certificated capability of the men whom it employed. The fees received during the first year of the co-operation's work amounted to £500; they totalled to £1,800 during the second year. For two or three years longer, however, it would be necessary to ask for some support from the public. The Duke of Argyll praised the efforts to augment the ranks of competent nurses and to enlarge the sphere of duty of retired army and navy men. Colonel Sir Edward Ward, K.C.B., Permanent Under-Secretary of the War Office, in moving a vote of thanks to the Princess, assured the co-operation of the sympathy of Mr. Haldane and all his colleagues in that department of the service. A kindred feeling at the Admiralty also was vouched for by Dr. J. Porter, C.B., Medical Director-General, who seconded the motion. He believed the training the navy nurse underwent was superior to any other. Undesirables were weeded out at the commencement; thorough instruction was given in the theory and practice of every department of sick-berth attendance, and, after passing an examination at Plymouth or Chatham, the men were drafted out to sea, where they imbibed the spirit of the navy and all that it involved. It became their second nature to be scrupulously clean, punctual, orderly, and obedient to orders—in fact, to possess all the characteristics of the best of the handy men. At about 40 years of age these men were passed into civil life, and Miss Ethel McCaul, the founder of the co-operation, was doing a splendid service in ensuring that some of them, at all events, remained in touch with their profession.

Letters, Notes, and Answers.

BRITISH MEDICAL ASSOCIATION AND BRITISH MEDICAL JOURNAL.

THE offices of the British Medical Association and of the BRITISH MEDICAL JOURNAL are at 429, Strand, London.

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

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2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
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2634, Gerrard, MEDICAL SECRETARY.

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CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

R. McK. asks how to prevent the inflammation of the skin that follows the use of Southey's tubes.

INCOME TAX.

M.D. writes that he has been compelled to pay income tax for three years past on an amount in excess of his income, and asks what legal remedy he has; also whether he is required to furnish particulars of his receipts and full details of expenses at the assessor's request when he appeals against the assessment for the current year.

*** Unless the practice is a new one, set up since April 5th, 1906, there is now no legal remedy against the over-assessments made for years prior to 1909–10. In support of our correspondent's appeal for this year he will have to furnish the particulars of his gross receipts and the amount of his expenditure under the various heads of expense, as required by the assessor or surveyor. If, however, he is unable to do so, it will be open to him to appeal personally before the Commissioners and produce to them the best evidence of the extent of his profits that he is able to advance.

ANSWERS.

IMBECILE CHILD.

X.Y.Z.—If an imbecile child of the poorer class be unmanageable at home, and especially if dangerous to itself or others, the attention of the district relieving officer should be called to the case, and it will be his duty to report it to the board of guardians, which has power to send it to an asylum or other appropriate institution, exacting from the parents such a contribution towards its maintenance as they can afford. The same procedure applies to *imbecile* school children, the education authority having only power to deal with children certified as *mentally defective* (not *imbecile*) under the Act of 1899. In only a few public lunatic asylums is special provision made for imbecile children, but they are admissible as "idiots or persons of unsound mind." Admission to voluntary institutions, such as Earlswood, is through election by subscribers.

LETTERS, NOTES, ETC.

DR. JOHN FLETCHER (Fulham) desires to state that an interview published in the *Daily Mirror* of November 24th does not correctly express his views, and that an unauthorized use of his name was made.

GRATUITOUS MEDICAL TREATMENT OF RATE-MAINTAINED PATIENTS.

WE observe that the city of Chester has issued an advertisement inviting applications for the position of honorary consulting surgeon to the Chester Isolation Hospital. This is, we presume, a hospital supported by the rates, and we would call attention to the fact that the Representative Meeting held in Sheffield in 1908 recorded its opinion that the services of the profession should not be given gratuitously to patients who are maintained by public funds.

HUMOURS OF CHEAP INSURANCE.

DESUNT CAETERA writes: A short time ago I was asked by letter to undertake the medical examination of a patient of mine with a view to an insurance on his life. The proposal form was long and complicated, and involved technical details and cross-examination concerning all possible relatives down to the third generation. In addition I was asked to sign, on a separate form, a declaration to the effect that I was a duly registered practitioner, residing and practising in the town of ——. Remuneration for the same was fixed at 10s. 6d. In reply, I stated that my fee for such an examination would be 1 guinea. I did not make that examination. Sequel: About a week subsequently the patient called at my house late in the evening, in great agony, saying that "he could not pass his water." I found that he was suffering from stricture of the urethra, and I could not get even a fine stricture catheter into his bladder. I told him that it was as well the matter of his examination for the insurance company was still in abeyance, as I should have been obliged to reject him. His reply was: "Oh, that doesn't matter. I went down to the company's doctor at —— to-day, and I was passed as a first-class life. This attack came on in the train while I was on my way home."

EUCALYPTUS OIL.

DR. T. REUELL ATKINSON writes: On November 24th I received an urgent summons to a boy, aged 6 years, whose father had, by mistake, given the boy a tablespoonful of eucalyptus oil instead of his medicine. On my arrival I found the child apparently none the worse, except that he was inclined to drowsiness. The dose of eucalyptus oil is given as from half a drop to three drops for an adult. The child, who was suffering from influenza, with albuminuria as a complication, has been seen several times by me since the oil was taken, and appears to have got on better than usual; the oil has certainly done him no harm. The albumen has disappeared from the urine, and now (November 28th) the lad is practically well. Has eucalyptus any medicinal action, and, if so, why confine its use to such minute doses? Has it any poisonous action? Apparently not. The mother of the child tells me that their foreman's wife is accustomed to administer teaspoonful doses to her children of eucalyptus oil when they catch cold.

*** There seems to be a good deal of difference of opinion as to the proper dose of eucalyptus oil. The dose given in the *British Pharmacopoeia* is that mentioned by our correspondent, ½ to 3 minims; in Martindale and Westcott's *Extra Pharmacopoeia* there is an emulsion 1 in 40, the dose of which is said to be 1 to 4 drachms, quantities which would contain from 1½ to 6 minims; and in the last edition of the *United States Dispensatory* the dose is said to be from 10 to 15 minims. Several cases published in the BRITISH MEDICAL JOURNAL in 1906 show that large doses are capable of producing somewhat alarming symptoms; the most prominent appear to be immediate or early vomiting, followed by unconsciousness, laboured or stertorous breathing—sometimes with marked cyanosis, and contracted pupils. In one of the cases, that related by Dr. E. C. Myott,[1] the patient was an adult and had taken 6 drachms; in another case, that recorded by Dr. Joseph Benjamin, of Ahmedabad,[2] the patient was a boy, aged 8, who had taken 6 drachms; in the third case, that recorded by Dr. Orr,[3] the patient was a boy aged 2 years and 9 months, who had taken two drachms; in all cases recovery was rapid.

[1] BRITISH MEDICAL JOURNAL, vol. i, 1906, p. 558.
[2] Ibid., p. 1020.
[3] Ibid., p. 1085.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

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